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Office on Drugs and Crime

2008
WORLD DRUG REPORT

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The boundaries, names and designations used in all maps in this book do not imply official endorsement or acceptance by the United Nations.

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CONTENTS

Preface 1
Introduction 3
Explanatory notes 5
Executive Summary 7

1. TRENDS IN WORLD DRUG MARKETS

1.1 Overview
1.1.1 Global evolution 25
1.1.2 Global outlook 34
1.2 Opium / Heroin market
1.2.1 Summary Trend Overview 37
1.2.2 Production 38
1.2.3 Trafficking 45
1.2.4 Consumption 55
1.3 Coca / Cocaine market
1.3.1 Summary Trend Overview 65
1.3.2 Production 66
1.3.3 Trafficking 72
1.3.4 Consumption 84
1.4 Cannabis market
1.4.1 Summary Trend Overview 95
1.4.2 Production 96
1.4.3 Trafficking 102
1.4.4 Consumption 111
1.5 Amphetamine-type stimulants market
1.5.1 Summary Trend Overview 123
1.5.2 Production 124
1.5.3 Trafficking 137
1.5.4 Consumption 153

2. A CENTURY OF INTERNATIONAL DRUG CONTROL

2.1 Origins: The development of the opium problem in China 173
2.2 The foundation of an international drug control system 177
2.3 Drug control under the League of Nations, 1920-1945 192
2.4 Development of the present system under the United Nations 196
2.5 Achievements and unintended consequences of the international drug control system 212

CONTENTS

3. STATISTICAL ANNEX

3.1 Production
- 3.1.1 Afghanistan 225
- 3.1.2 Bolivia 233
- 3.1.3 Colombia 237
- 3.1.4 Lao PDR 242
- 3.1.5 Myanmar 244
- 3.1.6 Peru 249

3.2 Seizures 253

3.3 Seizures of illict laboratories 254

3.4 Prices
- 3.4.1 Opiates: Wholesale, street prices and purity levels 255
- 3.4.2 Cocaine: Wholesale, street prices and purity levels 260
- 3.4.3 Cannabis: Wholesale, street prices and purity levels 264
- 3.4.4 Amphetamine-type stimulants: Wholesale, street prices and purity levels 269

3.5 Consumption
- 3.5.1 Annual Prevalence
  - 3.5.1.1 Opiates 273
  - 3.5.1.2 Cocaine 275
  - 3.5.1.3 Cannabis 276
  - 3.5.1.4 Amphetamine-type stimulants (excluding ecstasy) 278
  - 3.5.1.5 Ecstasy 280
- 3.5.2. Treatment Demand
  - 3.5.2.1 Primary drugs of abuse among persons treated for drug problems in Africa 281
  - 3.5.2.2 Primary drugs of abuse among persons treated for drug problems in America 282
  - 3.5.2.3 Primary drugs of abuse among persons treated for drug problems in Asia 283
  - 3.5.2.4 Primary drugs of abuse among persons treated for drug problems in Europe 284
  - 3.5.2.5 Primary drugs of abuse among persons treated for drug problems in Oceania 285

4. METHODOLOGY 289

Preface

Indicators of the world drug situation remain favourable over the long-term, but there are recent warning signs that must be heeded.

A global and long-term perspective reveals that illicit drug use has been contained to less than 5% of the adult population (yearly incidence rate for people aged 15-64). In other words, less than one in every twenty people used illicit drugs at least once in the past 12 months. Problem drug users (people severely drug dependent) are limited to less than one tenth of this already low percentage: there may be 26 million of them, about 0.6% of the planet's adult population.

This is an impressive achievement when considered in the historical perspective of a century of drug control (reviewed in Chapter 2), or the decade since a special session of the United Nations General Assembly (UNGASS) in 1998 which motivated countries to be more proactive in reducing drug supply and demand. It is also an undeniable success when compared to the consumption of tobacco or alcohol, addictive psychoactive drugs that are used by at least one quarter of the world's adult population, and cause millions of deaths every year. In the absence of the drug control system, illicit drug use may well have reached such levels, with devastating consequences for public health. In short, in terms of reducing demand, national and multilateral drug control seem to be working.

On the supply side, the story is different. This *Report* provides evidence of a surge in the supply of illicit drugs in 2007. Afghanistan had a record opium harvest, and world opium production (because of higher yields) almost doubled between 2005 and 2007. Coca cultivation increased in the Andean countries last year, although cocaine production remained stable because of lower yields per hectare. In the cannabis market, there are two worrying trends: Afghanistan has become a major producer of cannabis resin; in developed countries, indoor cultivation is producing more potent strains of cannabis herb.

The past few *World Drug Reports* have stated that the world drug problem is being contained in the sense that it had stabilized. This year's *Report* shows that containment is under threat. Urgent steps must be taken to prevent the unravelling of progress that has been made in the past few decades of drug control. Furthermore, containment should not be seen as an end in itself. Real success will only come when supply and demand actually go down (rather than level off), across the world. The current upsurge in supply together with the development of new trafficking routes (mostly through Africa) could eventually strengthen demand where it already exists (mostly in developed countries) and create new markets for some of the world's deadliest substances (mostly in developing countries).

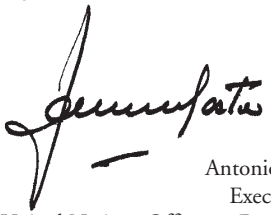
Progress is needed in three areas.

First, public *health* – the first principle of drug control – should be brought back to centre stage. Currently, the amount of resources and political support for public security and law enforcement far outweigh those devoted to public health. This must be re-balanced. Drug dependence is an illness that should be treated like any other. More resources are needed to prevent people from taking drugs, to treat those who are dependent, and to reduce the adverse health and social consequences of drug abuse.

Second, drug control should be looked at in the larger context of *crime prevention* and the rule of law in order to cut links between drug trafficking, organized crime, corruption and terrorism. Some of the world's biggest drug producing regions (in Afghanistan, Colombia, and Myanmar) are out of the control of the central government. Drug trafficking is undermining national security (for example in parts of Central America, the Caribbean, Mexico, and West Africa). Drug money is used as a lubricant for corruption, and a source of terrorist financing: in turn, corrupt officials and terrorists make drug production and trafficking easier.

Third, protecting public security and safeguarding public health should be done in a way that upholds *human rights* and human dignity. This year's 60th anniversary of the Universal Declaration of Human Rights provides us with a useful reminder of the inalienable rights to life and a fair trial. Although drugs kill, we should not kill because of drugs. As we move forward, human rights should be a part of drug control.

In short, to hold the line and to further reduce the threat posed by drugs, more attention must be devoted to reducing demand for drugs, promoting security and development in the world's major drug producing regions, assisting states caught in the cross-fire of drug trafficking, and stemming the spread of drugs into countries in transition.



Antonio Maria Costa
Executive Director
United Nations Office on Drugs and Crime

Introduction

The United Nations *Office on Drugs and Crime* (UNODC) is a global leader in the multilateral effort against illicit drugs and international crime. The three pillars of its work programme are:

- Research and analytical work to increase knowledge and understanding of drugs and crime issues and expand the evidence-base for policy and operational decisions;
- Normative work to assist States in the ratification and implementation of the international treaties, the development of domestic legislation on drugs, crime and terrorism, and the provision of secretariat and substantive services to the treaty-based and governing bodies; and
- Field-based technical cooperation projects to enhance the capacity of States Members to counteract illicit drugs, crime and terrorism.

Recognizing the importance of comprehensive, factual and objective information in the field of international drug control, as well as the need to improve the evidence base available for policy making, the General Assembly entrusted UNODC with the mandate to publish "comprehensive and balanced information about the world drug problem" in 1998. UNODC has published such assessments annually since 1999.

This year, the Report retains the one-volume format introduced in 2007. Under the more synthetic format, the detailed seizures tables are available on UNODC's website. A PDF file containing the detailed seizure tables is available for review and downloading at: *www.unodc.org*. The detailed seizure tables are also available on CD by request. CDs can be ordered via the following e-mail address: *RAS@unodc.org*

The Report continues to provide in depth trend analysis of the four main drug markets in its first section. In addition, to mark the one hundred year anniversary of the Shanghai Opium Commission, and one hundred years of international drug control, the Report contains an in-depth look at the development of the international drug control system. The Report also contains a small statistical annex which provides a detailed look at production, prices and consumption.

As in previous years, the present Report is based on data obtained primarily from the annual reports questionnaire (ARQ) sent by Governments to UNODC in 2007, supplemented by other sources when necessary and where available. Two of the main limitations herein are: (i) that ARQ reporting is not systematic enough, both in terms of number of countries responding and of content, and (ii) that most countries lack the adequate monitoring systems required to produce reliable, comprehensive and internationally comparable data. National monitoring systems are, however, improving and UNODC has contributed to this process.

Electronic copies of the *World Drug Report 2008* Report can be accessed via *www.unodc.org*.

Comments and feedback on the Report are welcome and can be sent to: *RAS@unodc.org*.

Explanatory notes

This Report has not been formally edited.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Countries and areas are referred to by the names that were in official use at the time the relevant data were collected.

Terms: Since there is some scientific and legal ambiguity about the distinctions between drug 'use', 'misuse' and 'abuse', this Report uses the neutral terms, drug 'use' or 'consumption'.

Maps: The boundaries and names shown and the designations used on maps do not imply official endorsement or acceptance by the United Nations. A dotted line represents approximately the line of control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Disputed boundaries (China/India) are represented by cross hatch due to impossibility of detail.

The data on population used in this Report comes from: United Nations, Department of Economic and Social Affairs, Population Division (2007). World Population Prospects: The 2006 Revision.

In various sections, this Report refers to a number of regional designations. These are not official designations. They are defined as follows: West and Central Europe: EU 25, EFTA, San Marino and Andorra; East Europe: European CIS countries; South East Europe: Turkey and the non-EU Balkan countries; North America: Canada, Mexico and the United States of America.

The following abbreviations have been used in this Report:

ARQ	annual reports questionnaire
ATS	amphetamine-type stimulants
CICAD	Inter-American Drug Abuse Control Commission
CIS	Commonwealth of Independent States
DEA	United States of America, Drug Enforcement Administration
DELTA	UNODC Database on Estimates and Long Term Trend Analysis
DUMA	Drug Use Monitoring in Australia
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
ESPAD	European School Survey Project on Alcohol and other Drugs
F.O.	UNODC Field Office
Govt.	Government
ICMP	UNODC Global Illicit Crop Monitoring Programme
IDU	Injecting drug use
INCB	International Narcotics Control Board
INCSR	United States of America, International Narcotics Control Strategy Report
Interpol	International Criminal Police Organization
LSD	lysergic acid diethylamide
NAPOL	National Police
PCP	phencyclidine
THC	tetrahydrocannabinol
UNAIDS	Joint and Co-sponsored United Nations Programme on Human Immunodeficiency Virus/ Acquired Immunodeficiency Syndrome
UNODC	United Nations *Office on Drugs and Crime*
WCO	World Customs Organization (also
WHO	World Health Organization

Weights and measurements

u.	Unit
lt.	Litre
kg	Kilogram
ha	Hectare
mt	Metric ton

Executive Summary

1. Trends in World Markets

1.1 Overview

The long-term stabilization of world drug markets continued into 2007, although notable exceptions occurred in some critical areas. As long term trends are obviously more meaningful and indicative than short term fluctuations, these limited reversals do not appear to negate the containment of the drug markets recorded since the late 1990s.

On the supply side, despite cultivation increases for both coca and opiates in 2007, the overall level of cultivation remained below the one recorded at the beginning of the UNGASS process (1998) and well below annual peaks in the last two decades (1991 for opium and 2000 for coca). In 2007, opium cultivation increased in both Afghanistan and Myanmar: coupled with higher yields, especially in southern Afghanistan, this generated much greater world output. With regard to cocaine, cultivation increased in Bolivia, Peru and especially Colombia, but yields declined, so production remained stable.

On the demand side, despite an apparent increase in the absolute number of cannabis, cocaine and opiates users, annual prevalence levels have remained stable in all drug markets. In other words, as the number of people who have used a particular drug at least once in the past 12 months has risen at about the same rate as population, drug consumption has remained stable in relative terms.

Given these yearly changes, the containment of world drug markets - recorded in these reports over the last few years - appears confirmed but under strain. Further consolidation, in 2008 and beyond, will mean tightening overall market containment and addressing slippage in areas where some expansion was registered in 2007. On the supply side this dictates two critical priorities: lowering opium poppy cultivation, especially in Afghanistan; and returning to the path of steadily declining coca cultivation registered in the first few years of this century.

On the demand side, more effectively containing the number of drug users, particularly in developing countries, has to become a critical priority; and more attention should be given to prevention, treatment and reducing the negative consequences of drug abuse. Rich countries' drugs markets fluctuate, mostly sideways and occasionally downwards: it is equally important to nurture and fortify the downward trend.

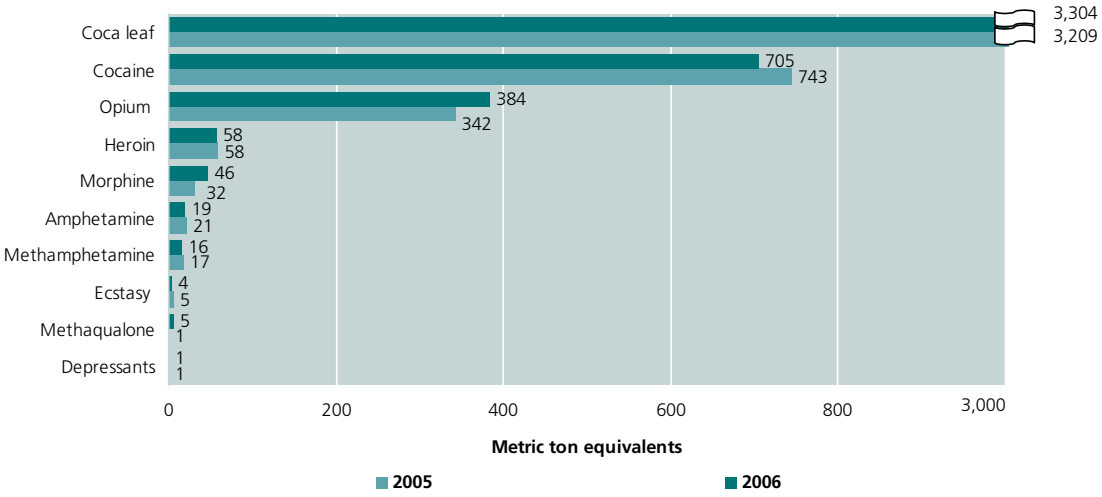
The containment of illicit drug use to less than 5% of the world population aged 15 to 64 (based on annual prevalence estimates, see Figure below) is a considerable achievement, documented historically in the pages of this report. The achievement is manifest on the two scales of time considered here: the century since the beginnings of the international drug control system (the subject of Chapter 2); or the decade since UNGASS in 1998.

In general, containment of the illicit drug problem to a relatively small fraction of the world population (aged 15 to 64) begins to look like an even more important achievement when considered in the light of three other estimates. First, problem drug use has been contained to a marginal fraction of the world population (0.6%) aged 15 to 64. Secondly, the consumption of tobacco, an addictive, psychoactive drug that is sold widely in open, albeit regulated markets, affects as much as 25% of the world adult population. Thirdly, mortality statistics show that illicit drugs take a small fraction of the lives claimed by tobacco (about 200,000 a year for illicit drugs versus about 5 million a year for tobacco).

Global trends in Drug Production

The total area under opium cultivation rose to 235,700 ha in 2007. This increase of 17% from 2006 puts global cultivation at just about the same level, though still marginally lower, than the 238,000 ha recorded in 1998. Although there was some growth in South-East Asian poppy cultivation, the global increase was almost entirely due to the 17% expansion of cultivation in Afghanistan, which is now 193,000 ha. With Afghanistan accounting for 82% of world opium cultivation, the proportion of South-East Asian expansion in overall cultivation was small. It is not unimportant, however, as it reverses six straight years of decline. Opium poppy cultivation in Myanmar increased 29%, from 21,500 ha in 2006 to 27,700 ha, in 2007. Afghanistan's higher yielding opium poppy led to a second year of global opium production increases. Opium production almost doubled between 2005 and 2007, reaching 8,870 mt in 2007, a level unprecedented in recent years. In 2007, Afghanistan alone accounted for over 92% of global opium production.

Global drug seizures (excluding cannabis): 2005 -2006



Coca cultivation increased in Colombia, Bolivia, and Peru in 2007. In Colombia, the area under cultivation expanded 27% to 99,000 ha. Increases for Bolivia and Peru were much smaller: 5% and 4% respectively. In total, coca cultivation increased 16% in 2007. Crops, however, were either not well tended or planted in poor yielding areas, as potential cocaine production only grew by 1% overall to 992 mt.

Estimates of cannabis herb production show a slight decline for the second straight year in 2006, seeming to reverse the upward trend that began in the early 1990s. Global cannabis herb production is now estimated to be 41,400 mt, down from 42,000 mt in 2005 and 45,000 in 2004. Cannabis yields continue to vary considerably and extremely high yielding hydroponically grown cannabis continues to be a cause for concern. Global cannabis resin production estimates fell around 10% from 6,600 mt in 2005 to 6,000 mt in 2006 (midpoint estimates). Global annual prevalence remained almost unchanged, going from 3.8% to 3.9% between 2005/06 and 2006/07.

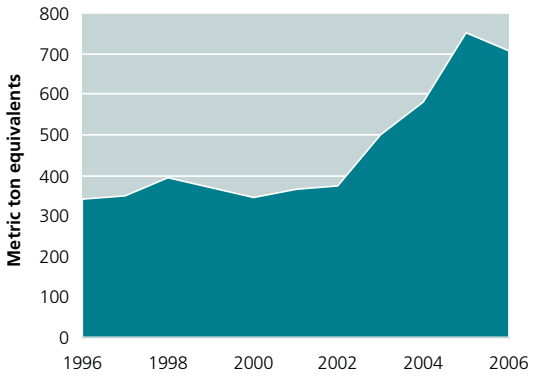
ATS production has remained in the range of 450-500 mt since in 2000. In 2007 global ATS production increased slightly to 494 mt. There has been a decline in ecstasy production (from 113 mt in 2005 to 103 mt in 2006), and a decrease in methamphetamine production (from 278 mt to 267 mt) which is again compensated by an increase in global amphetamine production (from 88 mt to 126 mt). The global annual prevalence rate remained 0.6% for amphetamines and 0.2% for ecstasy.

Global trends in Drug Trafficking

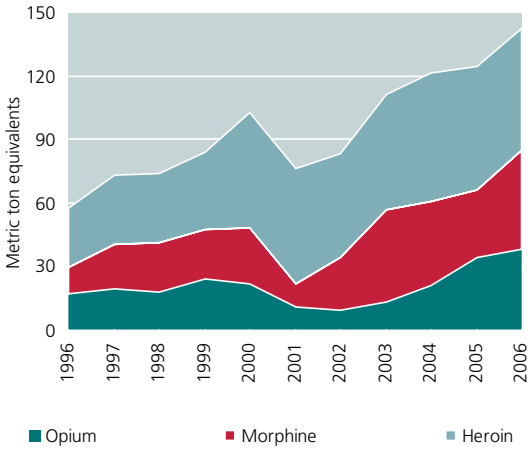
Only seizures for cannabis herb and the opiates grew year on year in 2006. The quantity of cannabis herb seized grew 12% to 5,200 mt in 2005, while the quantity of resin seizures declined by roughly 25% - most likely still reflecting a decline in production in Morocco. Cannabis herb seizures, however, were 27% down compared to 2004 (their post-1998 peak). A significant decline in cannabis plants seized was recorded in 2006.

Seizures of opium and morphine grew 10% and 31% respectively in 2006, reflecting continued production increases in Afghanistan. Heroin seizures, however, stabilized in 2006. Following five straight years of expansion, the quantity of cocaine seized fell by 5% in 2006. This is consistent with the stabilization of overall cocaine production in the 2004 to 2006 period. The quantities of amphetamine, methamphetamine and ecstasy seized were all down between 8% and 15% from 2005 to 2006. Overall ATS seizures increased by 2% reflecting seizures of non specified ATS, including "captagon" tablets.

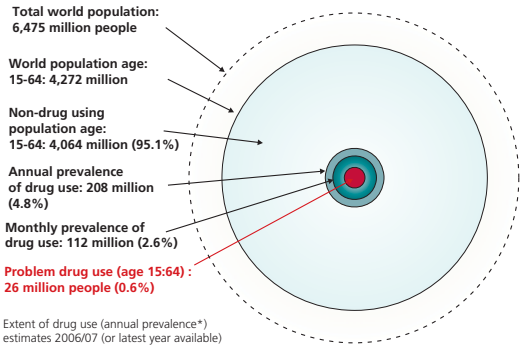
Global cocaine seizures: 1996- 2006



Global opiate seizures, expressed in heroin equivalents, by substance: 1996 - 2006



Illicit drug use at the global level (2006/2007)



Global trends in Drug Consumption

The proportion of drug users in the world population aged 15 to 64 has remained stable for the fourth straight year. It remains near the upper end of the 4.7% to 5.0% range it has stabilized at since the late 1990s. Approximately 208 million people or 4.9 % of the world's population aged 15 to 64 have used drugs at least once in the last 12 months. Problem drug use remains about 0.6% of the global population aged 15 to 64.

With the exception of ATS, each market has seen some increase in the absolute numbers of drug users, but prevalence rates, where they have increased, have only done so marginally. The global annual prevalence rates for 2006/07 over 2005/06 were as follows: cannabis went from 3.8% to 3.9%, cocaine from 0.34% to 0.37%, opiates from 0.37% to 0.39%, heroin from 0.27% to 0.28% and amphetamines from 0.60% to 0.58%.

1.2 Opium/Heroin Market

In 2007, the opium/heroin market continued to expand on the strength of cultivation increases in Afghanistan which pushed up the area under illicit opium poppy cultivation worldwide by 17%. However, cultivation also increased in South-East Asia, where it went up after six consecutive years of decline.

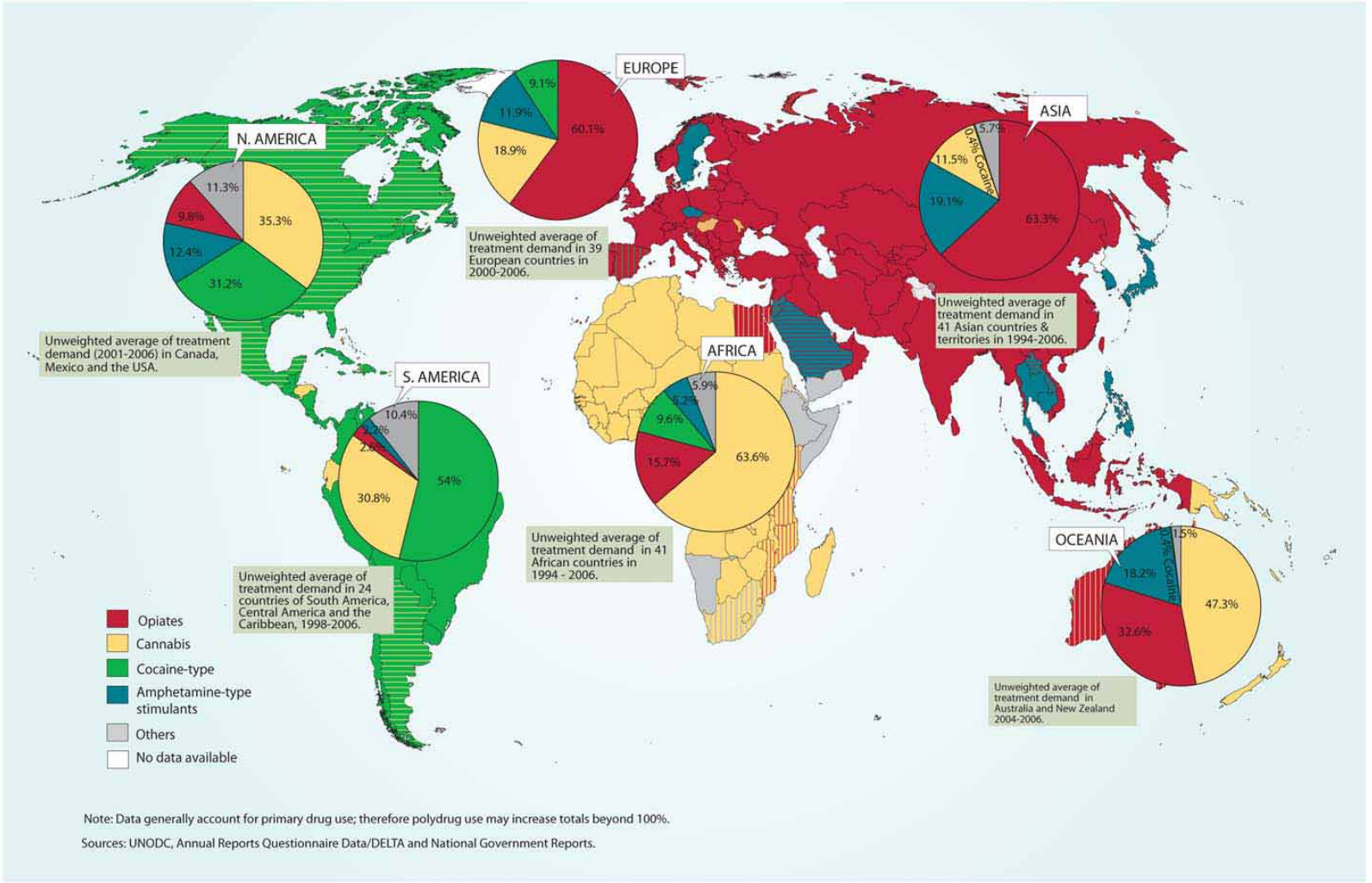
The area under opium poppy cultivation in Afghanistan rose by 17% in 2007 to 193,000 ha. This was the largest area under opium poppy cultivation ever recorded in Afghanistan, surpassing the 2006 record cultivation figure. The increase itself was less pronounced than in 2006, when the increase was 33%. Similar to the year before, Afghanistan accounted for 82% of the global area under opium poppy in 2007. Over two thirds of the opium poppy cultivation was located in the southern region of the country, where the southern province

Extent of drug use (annual prevalence*) estimates 2006/07(or latest year available)

	Cannabis	Amphetamine-type stimulants		Cocaine	Opiates	of which is Heroin
		Amphetamines	Ecstasy			
Number of abusers (in millions)	**165.6**	**24.7**	**9**	**16**	**16.5**	**12.0**
in % of global population age 15-64	3.9%	0.6%	0.2%	0.4%	0.4%	0.3%

*Annual prevalence is a measure of the number/percentage of people who have consumed an illicit drug at least

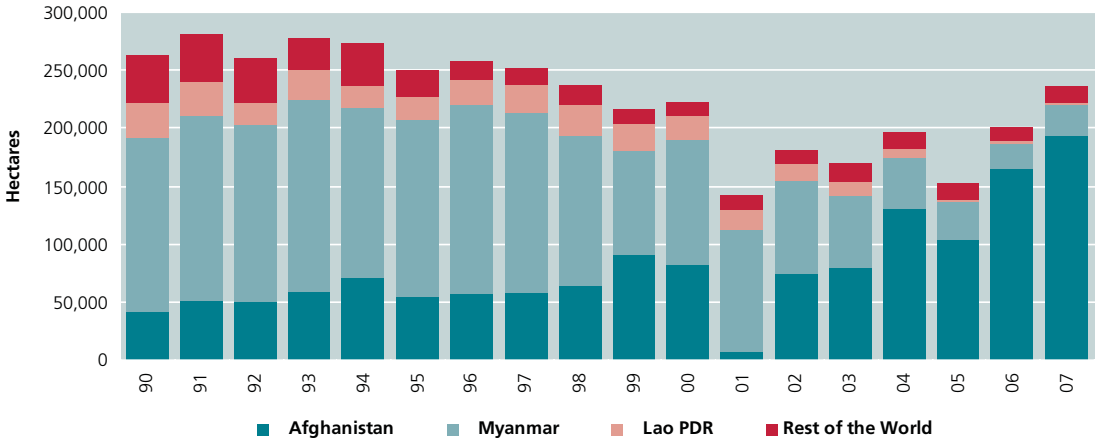
Main problem drugs (as reflected in treatment demand), 2006 (or lates year available)



Note: Data generally account for primary drug use; therefore polydrug use may increase totals beyond 100%.

Sources: UNODC, Annual Reports Questionnaire Data/DELTA and National Government Reports.

Global illicit opium poppy cultivation (hectares), by region: 1990 – 2007

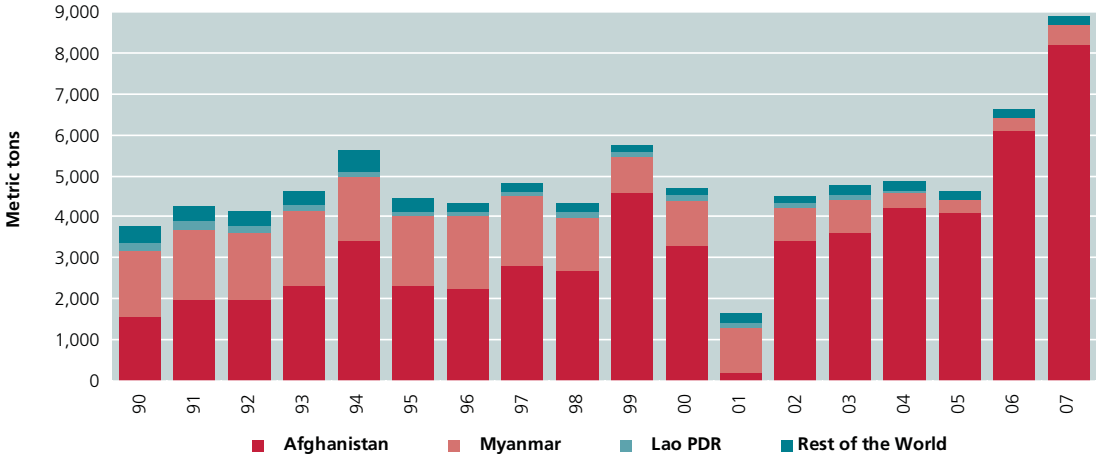


of Hilmand alone accounted for 53 % of total cultivation. Encouragingly, the number of provinces which were free of poppy in Afghanistan went up from 6 in 2006 to 13 in 2007.

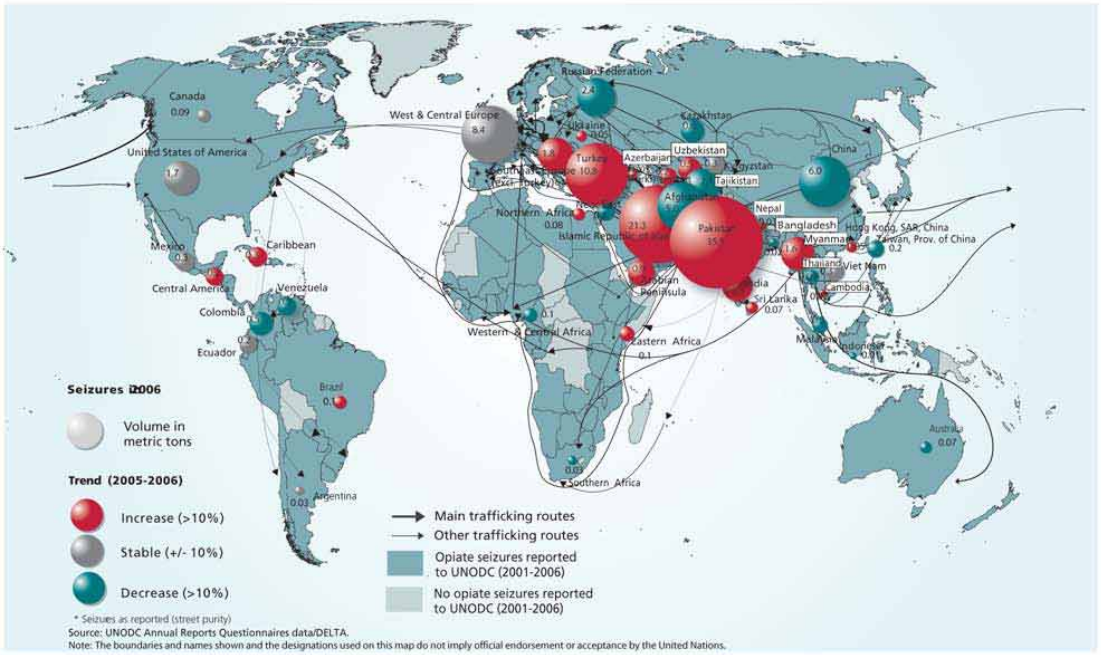
After six years of decline, opium poppy cultivation in South-East Asia increased by 22%, driven by a 29% cultivation increase in Myanmar. Despite this recent increase, opium poppy cultivation in South-East Asia has decreased by 82% since 1998. While some areas in Myanmar such as the Wa region remained opium poppy free, cultivation in the East and South of the Shan State, where the majority of opium cultivation takes place, increased significantly. In Lao PDR cultivation remained at a low level.

The opium poppy grown in Afghanistan has a higher yield than that of Myanmar. It is therefore mainly the cultivation increase in Afghanistan which led to the record high of opium production in 2007. Global opium production increased for a second year in a row to 8,870 mt, more than ever recorded in recent years. Global opium production has doubled since 1998 due to the shift to these higher yielding plants. In 2007, Afghanistan alone accounted for 92 % of global production, producing 8,200 mt of opium at an average opium yield

Global illicit opium production, by region: 1990 - 2007

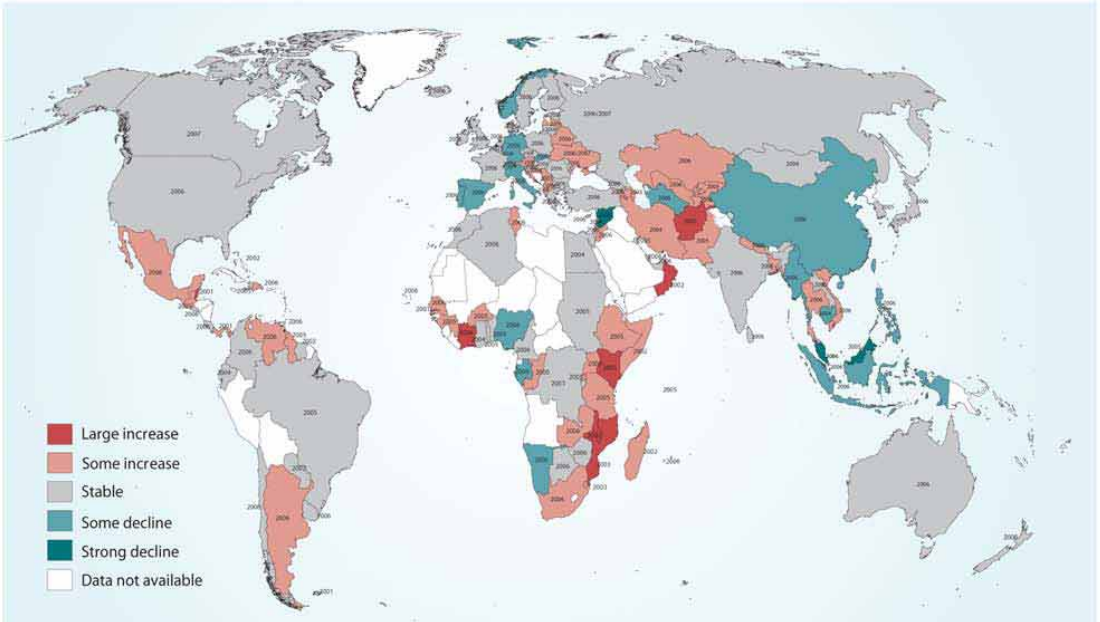


Trafficking in heroin and morphine, 2006 (countries reporting seizures of more than 10 kg)



Source: UNODC Annual Reports Questionnaires data/DELTA.
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

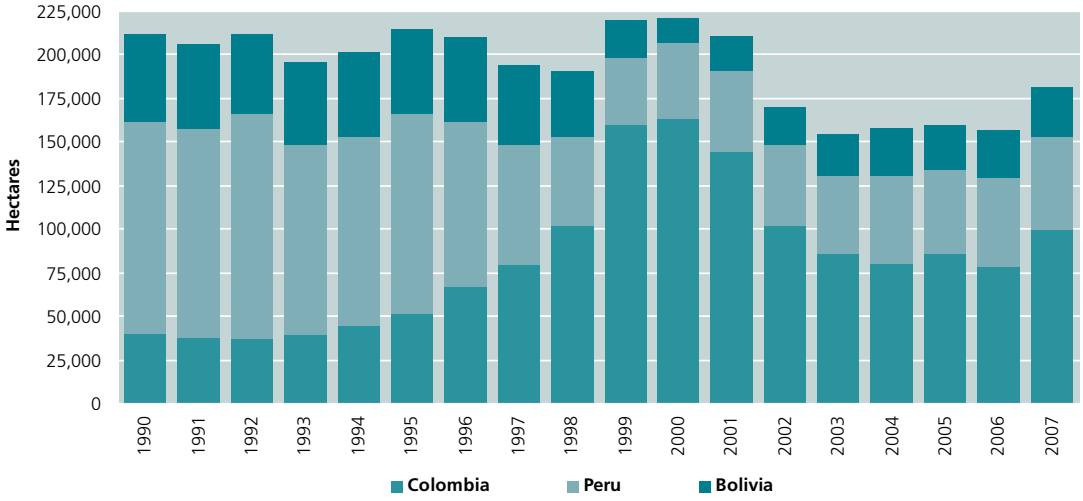
Changes in the use of heroin and other opiates, 2006 (or latest year available



Sources: UNODC Annual Reports Questionnaires data, National Household Surveys submitted to UNODC, United States Department of State (Bureau for International Narcotics and Law Enforcement Affairs), International Narcotics Control Strategy Report, Law Enforcement Reports, UNODC, Meetings of Heads of Law Enforcement Agencies (HONLEA), UNODC Illicit Drug Trends publications for various countries, UNODC Opium Surveys, Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP), UNODC Data for Africa Project..

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Global coca cultivation (hectares), by region: 1990-2007



of 42.5 kg/ha. In Myanmar, opium production increased by 46 % to 460 mt, but was still 65% lower than it was in 1998.

Market consumption patterns appear to have remained largely the same – with the majority of opiates on the market in Europe, the Near and Middle East and Africa continuing to come from Afghanistan, those on the market in Asia sourced from Myanmar and those on the market in North and South America from Mexico and Colombia. The largest seizures of heroin and morphine occurred in Pakistan, Iran and Turkey with seizure levels increasing in 2006.

Opiates remain the main problem drug in terms of treatment. This, combined with the enormous increases in production we are now witnessing, necessitate the rigorous monitoring of demand in the opiate market. While demand has been relatively stable at the global level, the countries surrounding Afghanistan continue to experience increasing levels of use. Increases were also recorded for most countries of East and Southern Africa. Consumer markets in Western and Central Europe seem to be largely stable. Opiates use also remains stable in North America.

1.3 Coca/Cocaine Market

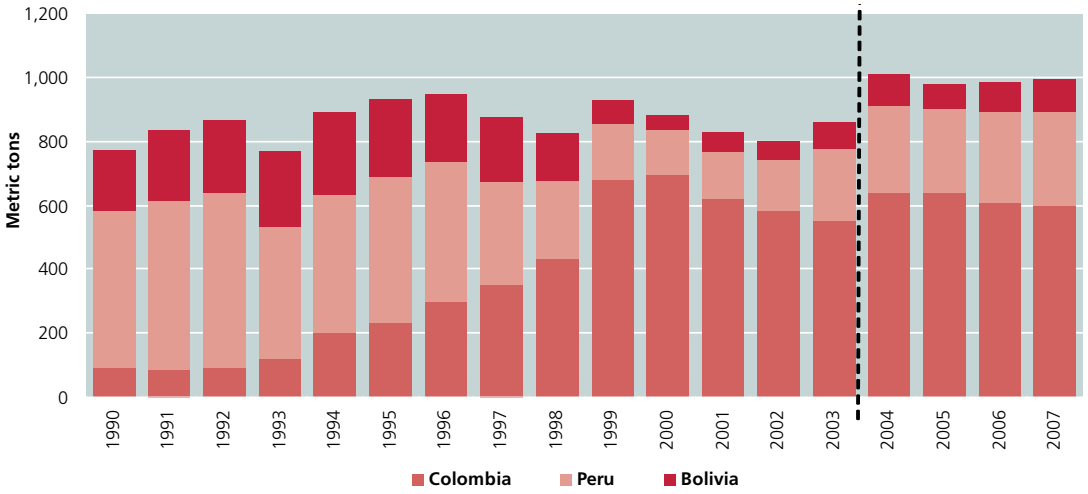
In 2007, the total area under coca cultivation in Bolivia, Colombia and Peru increased 16% to 181,600 ha. This was driven mainly by a 27% increase in Colombia, but cultivation also increased, at much lower rates, in Bolivia and Peru. Despite these recent increases, the global area under coca cultivation continues to be lower than in the 1990s and 18% below the level recorded in 2000 (221,300 ha). Colombia continued to account for the majority of cultivation. At 55 % of the global total, cultivation in Colombia rose to 99,000 ha in 2007. This was mainly due to an increase in the Pacific and Central regions, which were responsible for over three quarters of the total area increase. Pacific was the largest coca region in 2007 with 25,960 hectares.

In 2007, coca cultivation in Peru increased by 4 % to 53,700 ha. Despite having experienced the second consecutive increase in two years, coca cultivation remained well below the levels registered in the mid 1990s, when Peru was the world's largest cultivator of coca bush. Bolivia, the third largest producer of coca leaf, still trails behind Colombia and Peru. For a second consecutive year, coca cultivation increased in Bolivia, and amounted to 28,900 ha in 2007, an increase of 5%.

With less coca being grown in high yielding regions, there was a stabilisation in Colombian cocaine production despite the large increase in cultivation. Global potential cocaine production has remained stable over the last few years, reaching 994 mt in 2007, almost the same as in 2006 (984 mt). The majority of this, 600 mt in 2007, comes from Colombia.

The cocaine market is concentrated in the Americas, although increases in both distribution and use continue to occur in Western Europe and West Africa. The recent increases in both seizures and use in West Africa appear to reflect the development of new distribution routes through West Africa to Western Europe. This has led to a large increase in seizures in both regions. Consumption continues to increase both at destination and along the route. A contraction in the consumer markets of North America has led to a strong decline in seizures in North America. In the USA, the proportion of the workforce testing positive for cocaine declined by 19% in 2007, and by 36% since 1998. Cocaine use, however, continues to increase in South America.

Global cocaine production*, by region: 1990-2007



1.4 Cannabis Market

Cannabis continues to dominate the world's illicit drug markets in terms of pervasiveness of cultivation, volume of production, and number of consumers. Cannabis production was identified or reported in 172 countries and territories. The broad levels of use of this drug and its increasing potency make the long term containment of the market especially important. Global cannabis herb production is estimated to have stabilized at around 41,400 mt in 2006. Production in 2006 was almost equal to that of 2005, and 8% lower than 2004. The decline in global cannabis herb seizures between 2004 and 2006 was even more pronounced (-27%).

In 2006, most cannabis herb was produced in the Americas (55%) and in Africa (22%), followed by Asia and Europe. The cannabis market is characterized by a high degree of local and intra regional production and distribution. Countries producing for export remain limited: a number of African countries (including South Africa, Nigeria, Ghana and Morocco) and few Asian countries (including Afghanistan, Pakistan and Kazakhstan). Changes in the regional breakdown between 2004 and 2006 suggest that cannabis production increased in Europe (offsetting some of the decline of cannabis resin exports from Morocco), Asia and South America (including Central America and the Caribbean). Production appears to have declined in Africa from the peak in 2004. Production also appears to have declined in North America.

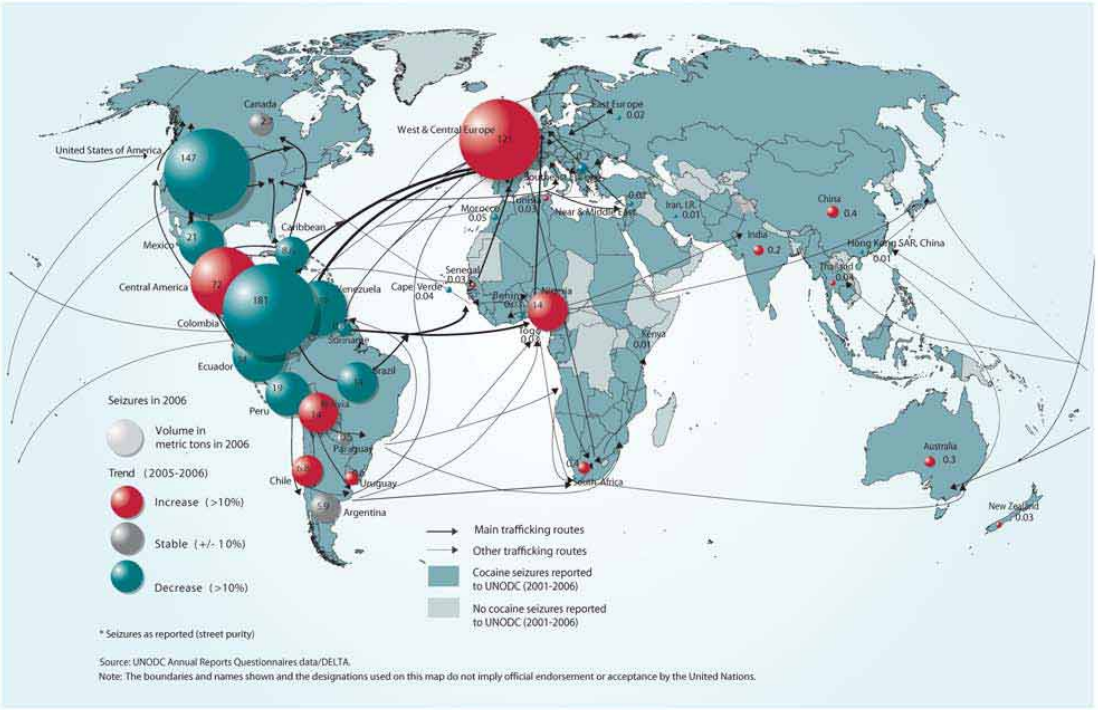
The ongoing increase in THC levels is changing the cannabis market. In Canada and the USA, where large-scale eradication efforts have been successful, the growth of THC levels likely reflects the ongoing shift towards indoor production of high potency cannabis. The average THC levels of cannabis on the US market almost doubled between 1999 and 2006, from 4.6% to 8.8%.

The extent of cannabis cultivation in Afghanistan appears to be approaching that of Morocco. In 2007, the area under cannabis in Afghanistan was equivalent to more than a third of the area under opium cultivation. UNODC estimates suggest that cannabis cultivation in Afghanistan increased from 30,000 ha in 2005 to 50,000 ha in 2006 and 70,000 ha in 2007. Tentative estimates suggest that 6,000 mt of cannabis resin were produced in 2006, down from 6,600 mt in 2005 and 7,500 mt in 2004. After many years of uninterrupted increases, global cannabis resin production appears to have been contained.

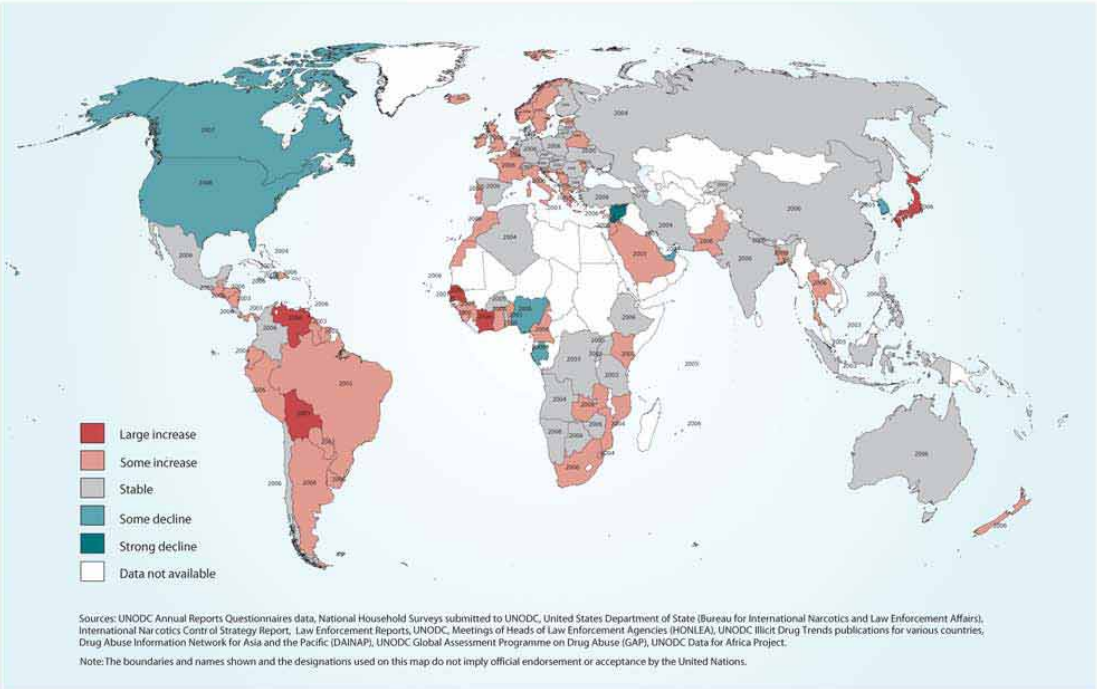
Both cannabis herb seizures (-27%) and cannabis resin seizures (- 30%) declined over the 2004-2006 period, reversing the previous upward trend. Close to 60% of global cannabis herb seizures were made in North America (58%) in 2006, notably by Mexico (1,893 mt) and the United States (1,139 mt). Seizures in North America remained basically stable in 2006 as compared to a year earlier but were 8% lower than in 2004.

The consumer market for cannabis dwarfs those for the other drug groups. UNODC estimates suggest that some 166 million people used cannabis in 2006, equivalent to 3.9 percent of the global population age 15-64. The prevalence rates are still highest in Oceania (14.5% of the population age 15-64), followed by North America (10.5%) and Africa (8%). The highest rates in Africa are found in West and Central Africa (12.6%) and southern Africa (8.4%). Cannabis use declined in Oceania and stabilized in Western Europe as well as in North America, despite an increase in Mexico. Large increases in use have been reported from South America, West and Central Africa.

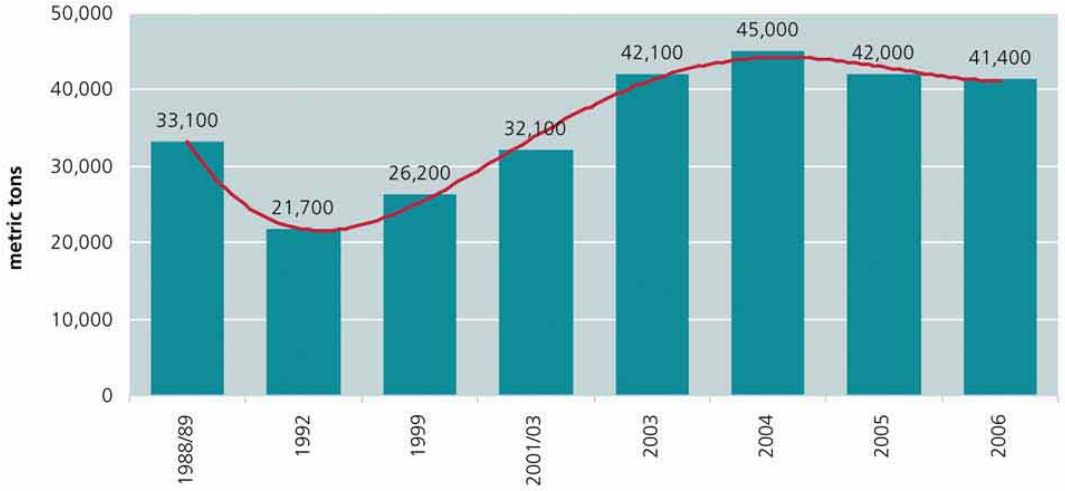
Trafficking in cocaine, 2006 (countries reporting seizures of more than 10 kg)



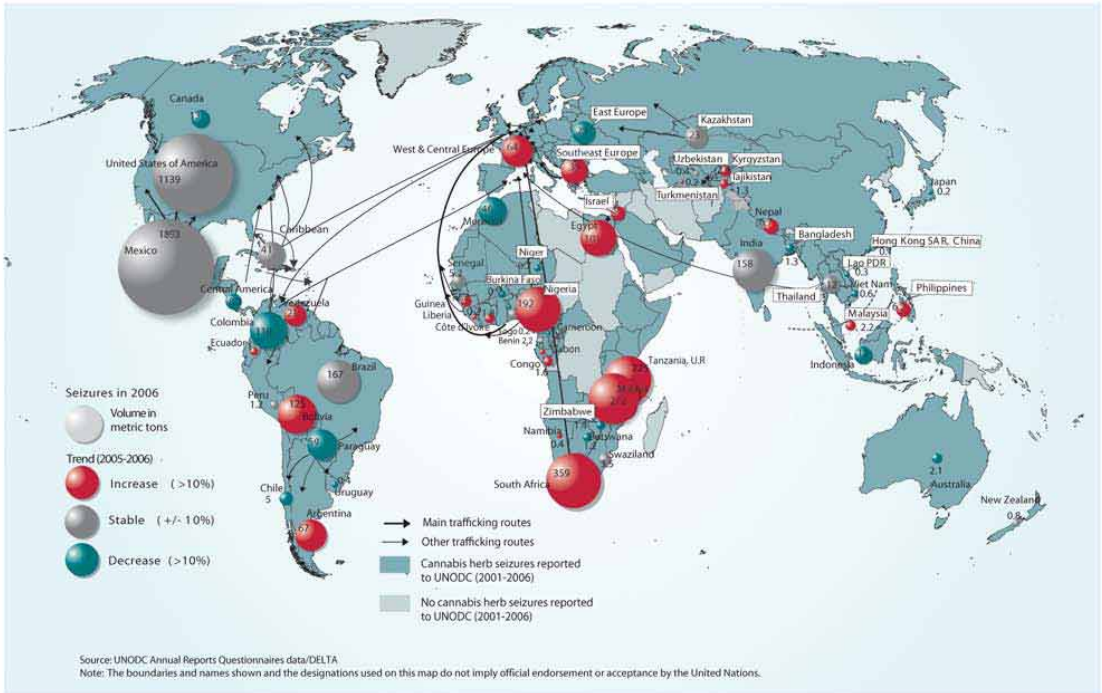
Changes in the use of cocaine, 2006 (or latest year available)



Estimate of global cannabis herb production: 1988-2006

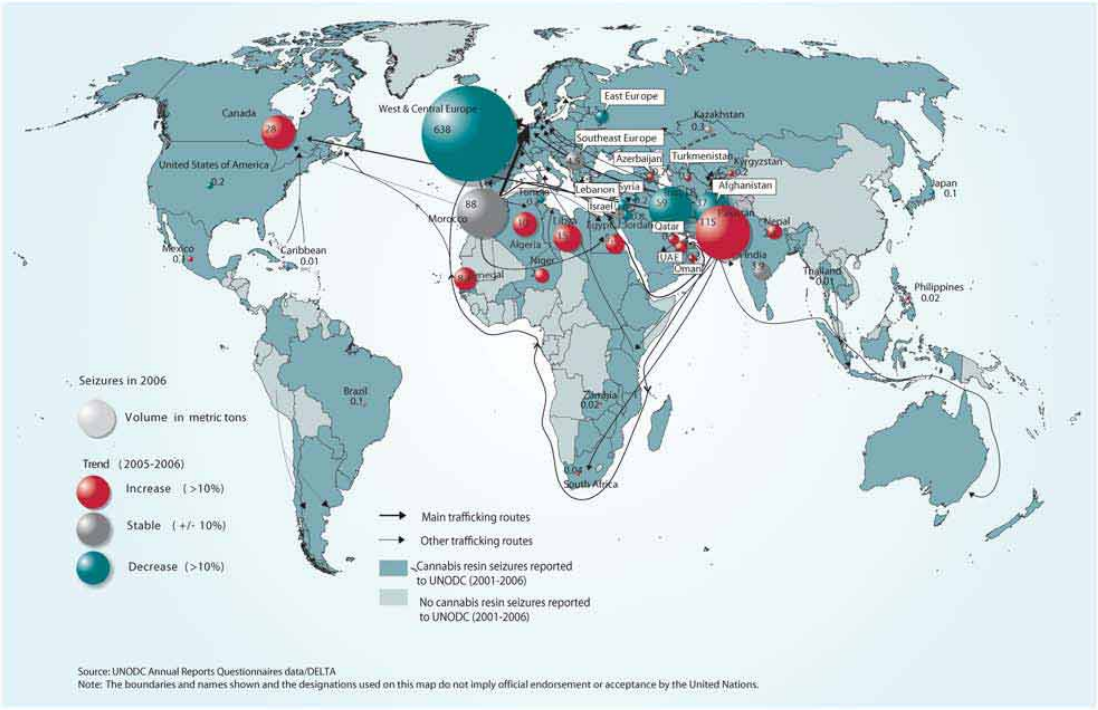


Trafficking in cannabis herb, 2006 (countries reporting seizures of more than 100 kg)



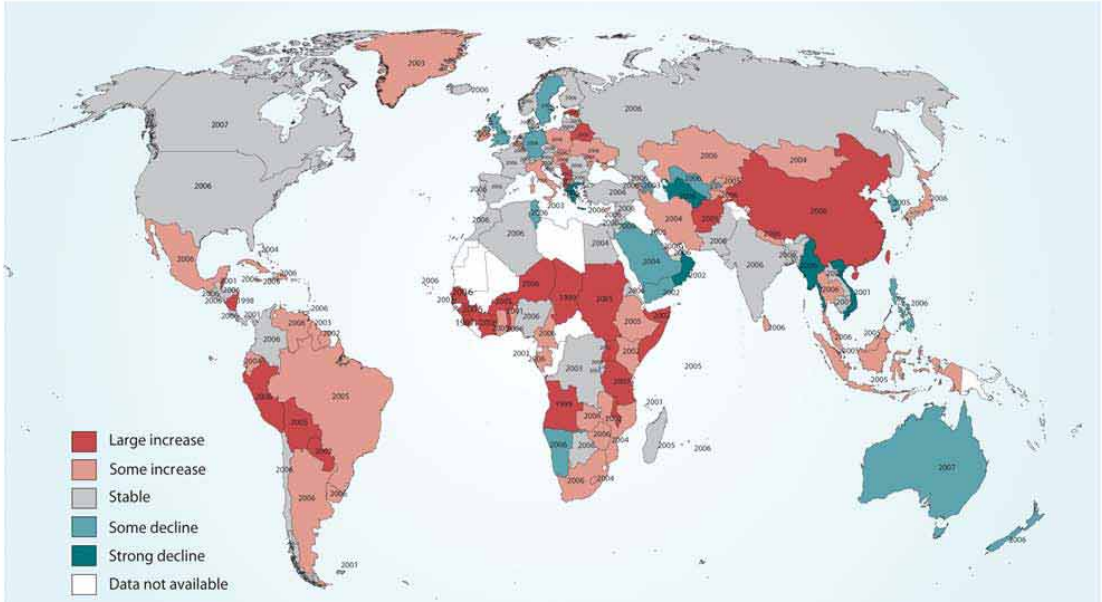
Source: UNODC Annual Reports Questionnaires data/DELTA
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Trafficking in cannabis resin, 2006 (countries reporting seizures of more than 100 kg)



Source: UNODC Annual Reports Questionnaires data/DELTA
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Changes in the use of cannabis 2006, (or latest year available)



Sources: UNODC Annual Reports Questionnaires data, National Household Surveys submitted to UNODC, United States Department of State (Bureau for International Narcotics and Law Enforcement Affairs), International Narcotics Control Strategy Report, Law Enforcement Reports, UNODC, Meetings of Heads of Law Enforcement Agencies (HONLEA), UNODC Illicit Drug Trends publications for various countries, Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP), UNODC Data for Africa Project.

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1.5 Amphetamine-type Stimulants Market

The ATS market continues to stabilise over the medium term. UNODC estimates that ATS manufacture worldwide could have ranged between 330 mt to 770 mt in 2006, with a mid-point estimate of 494 mt.

It appears that global manufacture may be increasing somewhat for the amphetamines group and decreasing for the ecstasy group. In 2006, it is estimated that methamphetamine accounted for 68% of the amphetamines group.

ATS manufacture is regionally specific, related both to demand and to the availability of precursor chemicals. Methamphetamine is manufactured throughout East and South-East Asia, North America, and Oceania, where precursors are more readily available and demand is high. Amphetamine continues to be manufactured largely in Europe. Ecstasy is manufactured primarily in North America, Western Europe and Oceania, though there is some production in East and South-East Asia.

Following consistent increases in the number of ATS laboratories detected globally throughout the 1990s – peaking at 18,639 in 2004 – detections fell to 8,245 in 2006. Though the number of laboratories seized worldwide has dropped dramatically, there is no commensurate reduction in methamphetamine manufacture, which is increasingly being done in large 'super-labs'. Seizures of ATS increased again in 2006, reaching 47.6 mt, just short of their 2000 peak. While trafficking in ATS end-products remains primarily an *intra*-regional affair, there is evidence of increasing *inter*-regional trafficking. ATS precursor trafficking continues to be predominantly *inter*-regional – with the majority of precursors trafficked out of South, East, and South-East Asia.

An estimated 24.7 million people in the world, equivalent to 0.6% of the population age 15-64 consumed amphetamines in 2006.[1] UNODC estimates ecstasy users to number approximately 9 million world-wide (0.2%). Neither estimate has changed substantially compared to last year or the beginning of the new millennium. Together, these figures exceed use levels for cocaine and heroin combined.

Nearly 55% of the world's amphetamines users (14 million) are estimated to be in Asia. Most of them are methamphetamine users in East and South-East Asia. Ninety seven per cent of all amphetamines used in Asia are consumed in the East and South-East sub-region. The total number of amphetamines users in North America is estimated at around 3.7 million people or 15% of global users. Europe accounts for 10% of all users or 2.7 million people.

1 The *amphetamines group* includes methamphetamine, amphetamine, and non-specified amphetamine (e.g., fenetylline, methylphenidate, phenmetrazine, methcathinone, amfepramone, pemoline, phentermine), but *excludes ecstasy* group drugs.

2. A Century of International Drug Control

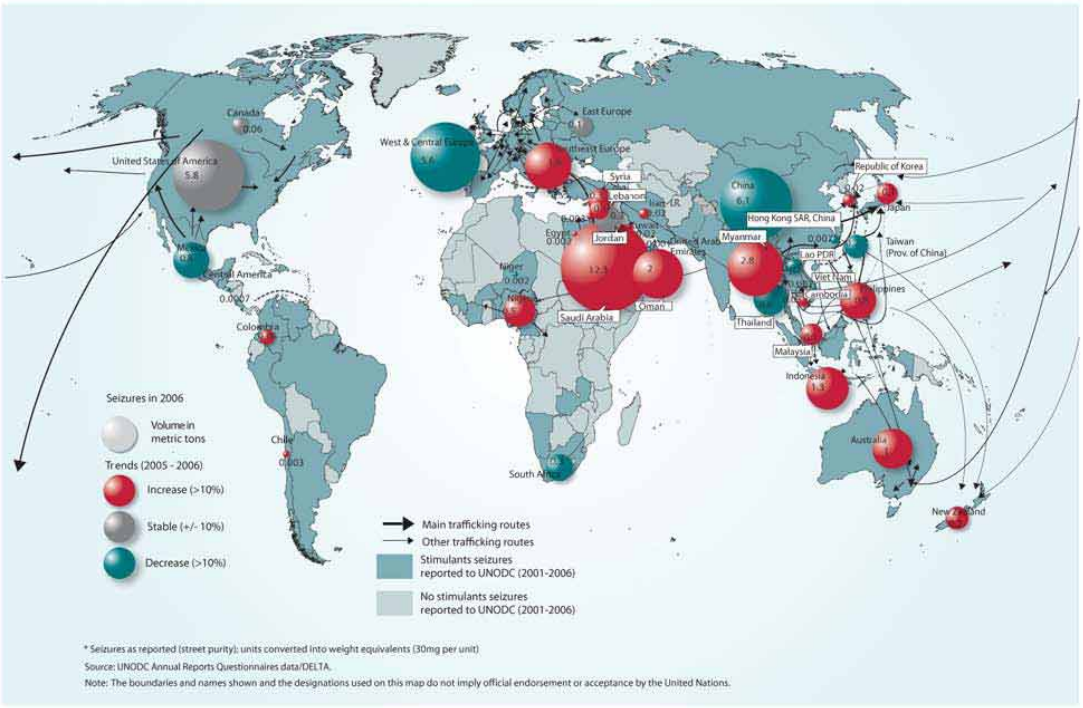
Nearly 100 years ago, the international community met in Shanghai to discuss the single largest drug problem the world has ever known: the Chinese opium epidemic. At its peak, tens of millions of Chinese were addicted to the drug, and nearly a quarter of the adult male population used it. The mighty Chinese Empire had seen its massive foreign reserves dwindle as drug imports reversed its longstanding favourable trade balance with the West.

Prior to the 1909 Shanghai Opium Commission, there was a global free market in addictive drugs, the consequences of which were disastrous. National governments and state-sponsored monopolies played an active role in peddling opium across borders. The profits to be made were enormous, generating as much as half of the national revenues of some island states serving as redistribution centres. Even a country the size of British India derived 14% of state income from its opium monopoly in 1880. China had unsuccessfully fought two wars against the British Empire to stop opium importation. When forced at gunpoint to legalise the drug, China too took to cultivation. It was able at once to halt currency outflows and create a huge source of tax revenue, deriving at least 14% of its income from the drug by the time of the Shanghai Commission.

Thus, there were large political and economic interests vested in maintaining the status quo, which makes all the more remarkable the efforts of campaigners to bring the world around a table to confront the damage caused by the opium trade. The Shanghai Commission represents one of the first truly international efforts to confront a global problem. The mere fact of being called to account caused many governments to initiate reforms in advance of the Commission. But the declaration of the Shanghai Commission was a non-binding document, negotiated by delegates lacking the power to commit on behalf of their states. Hammering out a body of international law to deal with the global drug problem would take over a dozen agreements and declarations issued over the better part of the next one hundred years.

The players, the rules, and the substances concerned would change over time. The first efforts to stop the opium trade attracted an unusual coalition of supporters, including conservative religious groups, Chinese isolationists, and left-wing critics of globalising capitalism. After World War I, the cause was championed by the League of Nations, which passed Conventions in 1925, 1931, and 1936. Its efforts were substantially

Trafficking in amphetamines, 2006 (countries reporting seizures of more than 1 kg)

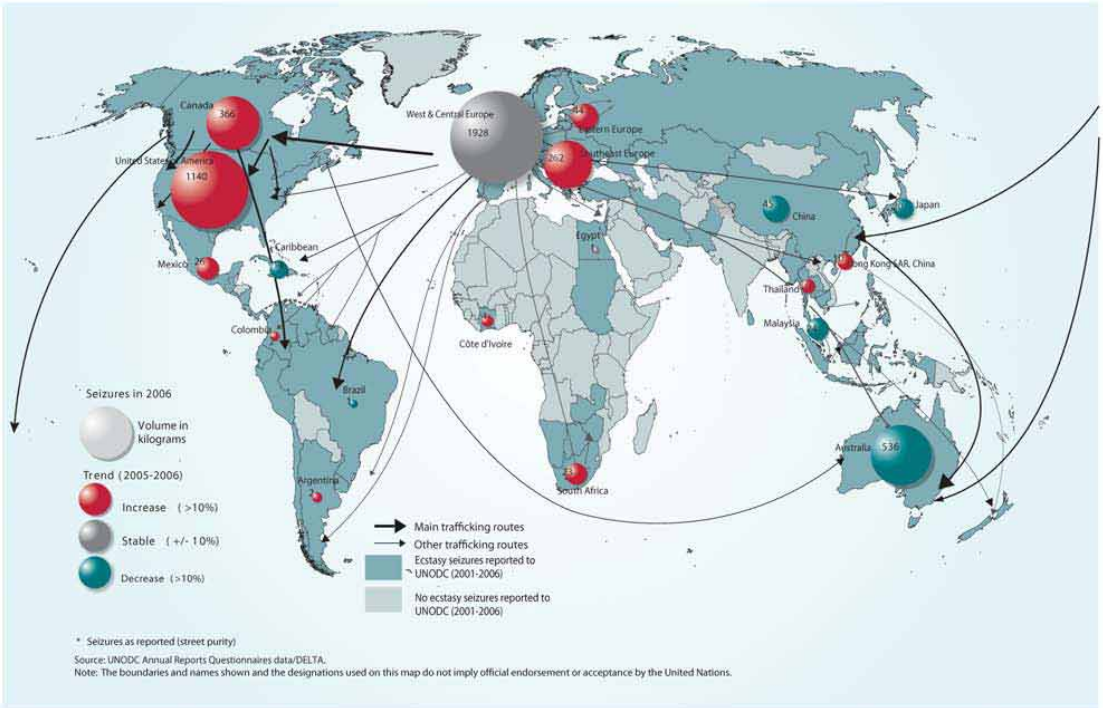


* Seizures as reported (street purity); units converted into weight equivalents (30mg per unit)

Source: UNODC Annual Reports Questionnaires data/DELTA.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Trafficking in ecstasy, 2006 (countries reporting seizures of more than 1 kg)

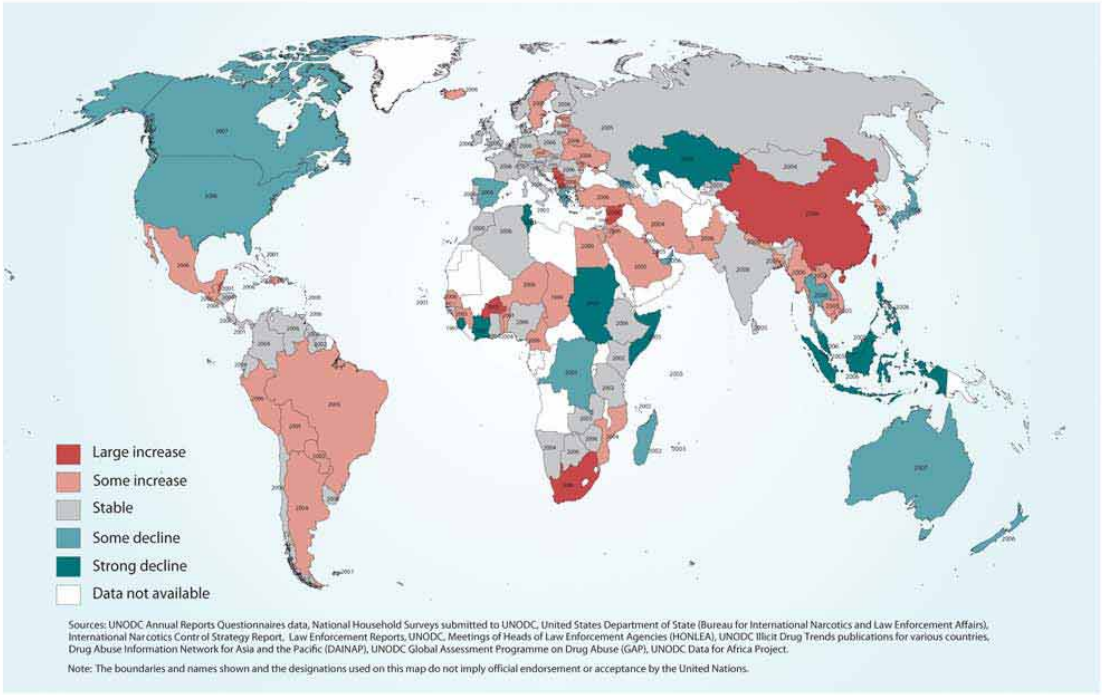


* Seizures as reported (street purity)

Source: UNODC Annual Reports Questionnaires data/DELTA.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

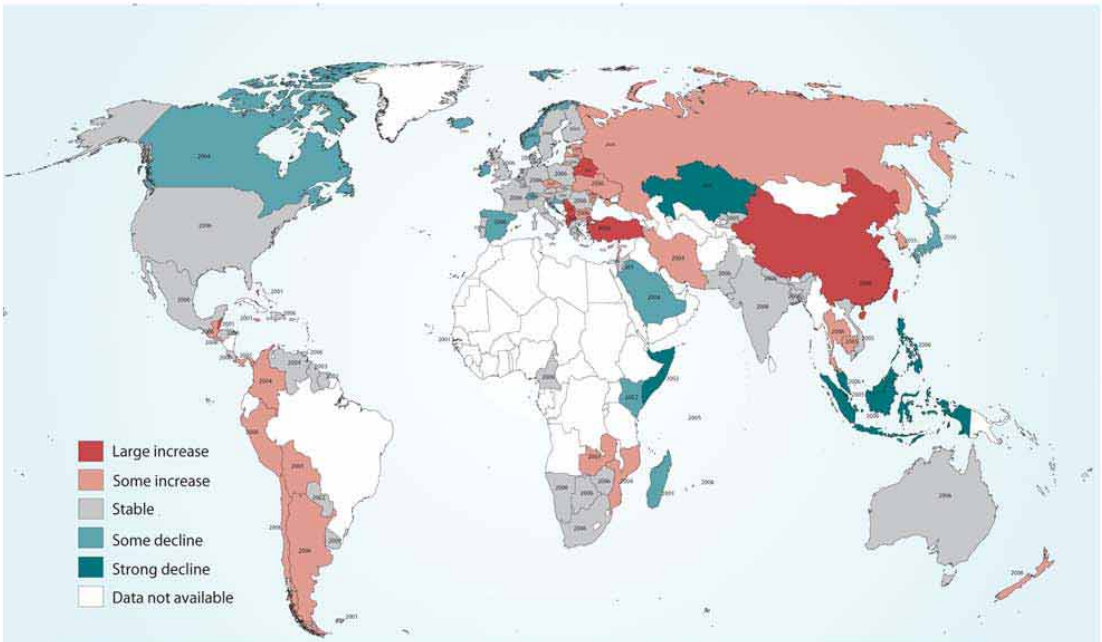
Changes in use of "amphetamines" (methamphetamine, amphetamine and related substances) 2006 (or latest year available)



Sources: UNODC Annual Reports Questionnaires data, National Household Surveys submitted to UNODC, United States Department of State (Bureau for International Narcotics and Law Enforcement Affairs), International Narcotics Control Strategy Report, Law Enforcement Reports, UNODC, Meetings of Heads of Law Enforcement Agencies (HONLEA), UNODC Illicit Drug Trends publications for various countries, Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP), UNODC Data for Africa Project.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Changes in use of Ecstasy (MDMA, MDA, MDEA) 2006 (or latest year available)



Sources: UNODC Annual Reports Questionnaires data, National Household Surveys submitted to UNODC, United States Department of State (Bureau for International Narcotics and Law Enforcement Affairs), International Narcotics Control Strategy Report, Law Enforcement Reports, UNODC, Meetings of Heads of Law Enforcement Agencies (HONLEA), UNODC Illicit Drug Trends publications for various countries, Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP), UNODC Data for Africa Project.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

hampered, however, by the fact that some key powers were not members. After World War II, the United Nations took up the torch, with Opium Protocols in 1946, 1948, and 1953 before in 1961 the *Sngle Convention* was passed that changed forever the way the world dealt with controlled substances.

The drugs evolved as quickly as the international system. Opium fell out of fashion in many parts of the world, eclipsed by more modern extractions of the drug, first morphine and then heroin. Cocaine also emerged in global geopolitics – few remember the time when Java outpaced South America as a source of coca leaf. Out of concern for the situation in Africa, cannabis was added to the list of internationally controlled substances in 1925. With the exception of synthetic opiates, the 1961 Convention did not cover the synthetic drugs which proliferated in the decade that followed its adoption, and so a second convention became necessary ten years later, the *Convention on Psychotropic Substances* (1971). Finally, the *1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances* consolidated and rationalised a number of agreements and declarations into a coherent system of international controls.

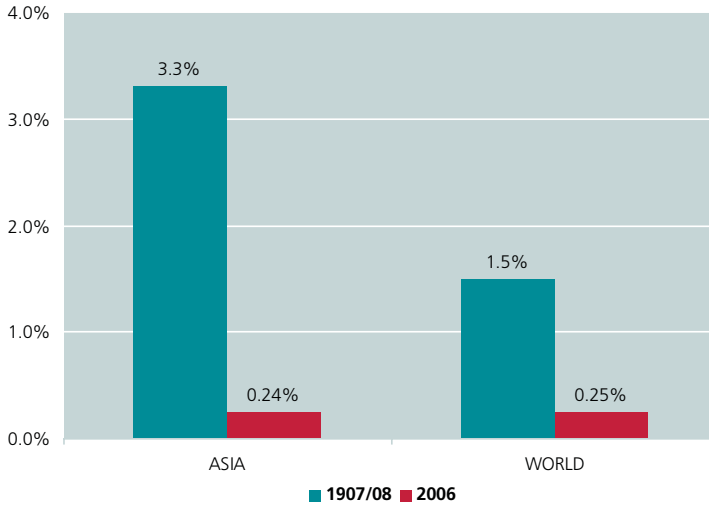
Today, these Conventions enjoy near universal adherence – over 180 countries are parties to the Conventions. Getting the diverse peoples of the world to agree on anything represents a substantial achievement, but this commonality is all the more remarkable given the highly contentious nature of the subject matter. Of course, the international drug control system has its critics. It remains a work in progress, continually adapting to address changing global circumstances and unfortunately producing some unintended consequences.

The first and most significant of these is the creation of a lucrative and violent black market. Secondly, the focus on law enforcement may have drawn away resources from health approaches to what, ultimately, is a public health problem. Thirdly, enforcement efforts in one geographic area have often resulted in diversion of the problem into other areas. Fourthly, pressure on the market for one particular substance has, on occasion, inadvertently promoted the use of an alternate drug. Finally, use of criminal justice system against drug consumers, who often come from marginal groups, has in many instances increased their marginalisation, diminishing capacity to offer treatment to those who need it most.

These unintended consequences represent serious challenges as the international drug control system faces its next century, but they should not overshadow its significant achievements. Under the current system of controls, it is highly unlikely that the world will ever face a drug problem like the one that confronted China 100 years ago.

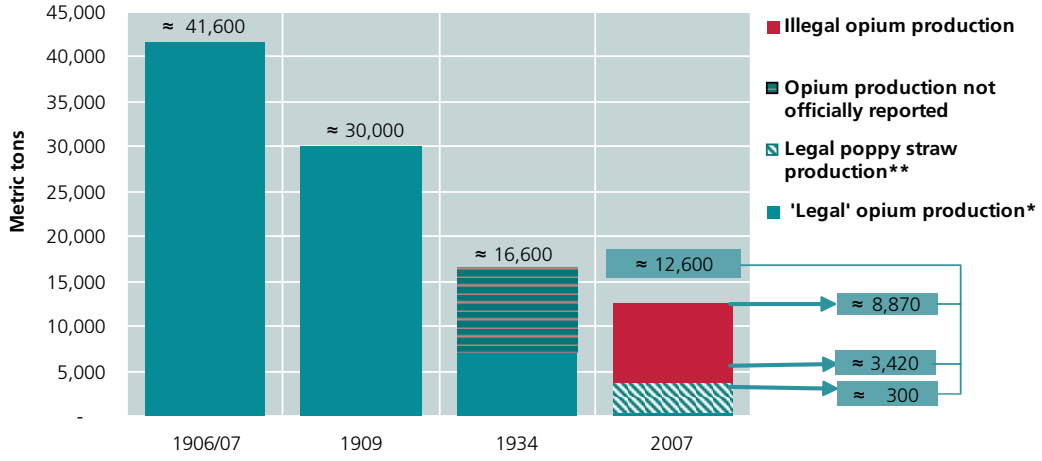
The problem of opium production for recreational use, which the system was originally designed to control, has almost entirely been confined to five provinces of a single, war-torn country. Despite recent booms in production in Afghanistan, long term illicit opiate production and use are in decline. No one can know for sure what the world would have looked like without the international drug control system, but it was initiated in response to a profound humanitarian crisis, and that crisis has largely been resolved. New drugs have emerged and taken their toll, but what damage could they have caused if they were allowed to proliferate in a free market, the way opium was spread in 19th century China?

Fig. 1: Estimates of annual prevalence of opiate use, 1907/08 and 2006



Sources: UNODC calculations based on International Opium Commission, Shanghai, February 1909.

Fig. 2: Global licit and illicit opium production, 1906/07 – 2007



* Legal status of opium production before 1912 must be differentiated from opium after 1964 (when Single Convention came into force)
** converted into opium equivalents
Sources: International Opium Commission, Shanghai, INCB, UNODC.

1. TRENDS IN THE WORLD DRUG MARKETS

1.1 Overview

1.1.1 Evolution of the World Drug Problem

Vigilance is needed to respond to year-on-year expansion in some market sectors

The long-term stabilization which occurred in drug markets continued into 2007, although some expansion occurred in critical areas. This year-on-year growth, however, does not negate the containment of the markets recorded since 1990: long term trends are obviously more meaningful and indicative than short term fluctuations. Despite cultivation increases for both coca and opium, the overall level of cultivation remained below 1998 levels and well below annual peaks in the last two decades (1991 for opium and 2000 for coca). Similarly, despite an apparent increase in the absolute number of cannabis, cocaine and opiates users, there was little change in global annual prevalence rates (the number of people who have used a particular drug at least once in the 12 months preceding the survey).

In 2007 opium cultivation increased in both Afghanistan and Myanmar, and coca cultivation increased in Bolivia, Colombia and Peru, though cocaine production remained more or less stable. Overall production of opiates increased, as did absolute numbers of opiate, cocaine and cannabis users. Annual prevalence levels have remained relatively stable in all drug markets.

Large increase in opium production in 2007

The steady increase of opiate output in Afghanistan continues to buck the trend of overall stabilization. Such marked expansion over a five year period apparently defies even normal parameters of supply and demand – as it seems to have led to a large surplus of opiates. Production is now mainly concentrated in the South of the country.

The total area under opium cultivation rose to 235,700 ha in 2007. This increase of 17% from 2006 puts global cultivation at just about the same level, though still marginally lower, than the 238,000 ha recorded in 1998. Although there was some growth in South-East Asian poppy cultivation, the global increase was almost entirely due to the 17% expansion of cultivation in Afghanistan. The area under cultivation in Afghanistan is now 193,000 ha. With Afghanistan accounting for 82% of the area under cultivation, the proportion of South-East Asian expansion in overall cultivation was small. It is not unimportant, however, as it reverses six straight years of decline. Opium poppy cultivation in Myanmar increased 29%, from 21,500 ha in 2006 to 27,700 ha, in 2007.

Afghanistan's higher yielding opium poppy led to a second year of global opium production increases. Opium production almost doubled between 2005 and 2007, reaching 8,870 mt in 2007, a level unprecedented in recent years. In 2007, Afghanistan alone accounted for over 92% of global opium production.

Although the absolute numbers of opiate users increased, the global annual prevalence rate for opiates and heroin remained unchanged at 0.4% and 0.3% respectively.

Coca cultivation expands on the strength of a 27% increase in Colombia

Coca cultivation increased in Bolivia, Colombia and Peru in 2007. In Colombia, the area under cultivation expanded 27% to 99,000 ha. Increases for Bolivia and Peru were much smaller: 5% and 4% respectively. In total, coca cultivation increased 16% in 2007. Crops, however, were either not well tended or planted in poor yielding areas, as potential cocaine production only grew by 1% overall to 994 mt. The global annual prevalence of cocaine use increased slightly from 0.34% in 2005/06 to 0.37% in 2006/07.

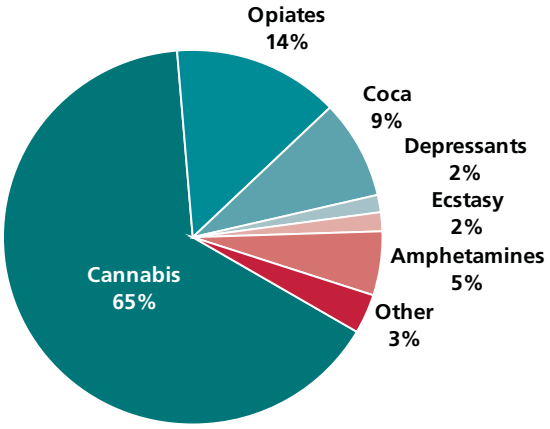
Cannabis market stable

Estimates for the production of cannabis herb show a slight decline for the second straight year in 2006, seeming to reverse the upward trend that began in the early 1990s. Global cannabis herb production is now estimated to be 41,400 mt, down from 42,000 mt in 2005. Cannabis yields continue to vary considerably and extremely high yielding hydroponically grown cannabis remains a cause for concern. Global cannabis resin production is estimated to have fallen around 10% from 6,600mt in 2005 to 6,000mt in 2006 (midpoint estimates). Global annual prevalence remained almost unchanged, increasing from 3.8% to 3.9% between 2005/06 and 2006/07.

ATS market stable

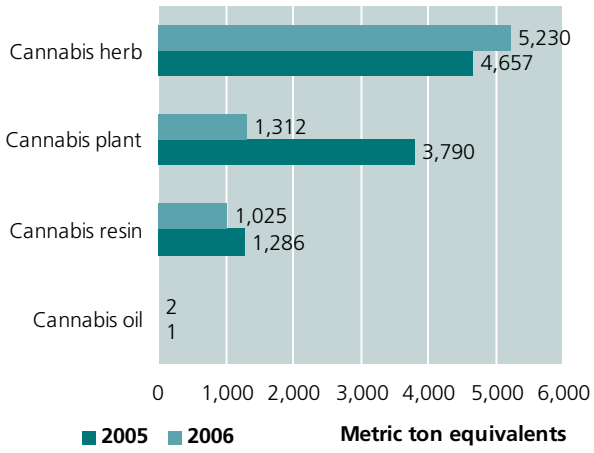
Amphetamine-type stimulants (ATS) production has remained in the range of 450-500 mt since 2000. In 2007 global production of ATS increased slightly to 496 mt. There was a decline in ecstasy production (from 113

Fig. 1: Breakdown of seizure cases by substance: 2006 (N = 1.65 million)



Source: UNODC, Government reports.

Fig. 2: Global cannabis seizures: 2005-2006



Source: UNODC, Government reports.

mt in 2005 to 103 mt in 2006), and a decrease in methamphetamine production (from 278 mt to 267 mt) which is again compensated by an increase in global amphetamine production (from 88 mt to 126 mt). The global annual prevalence rate remained 0.6% for amphetamines and 0.2% for ecstasy.

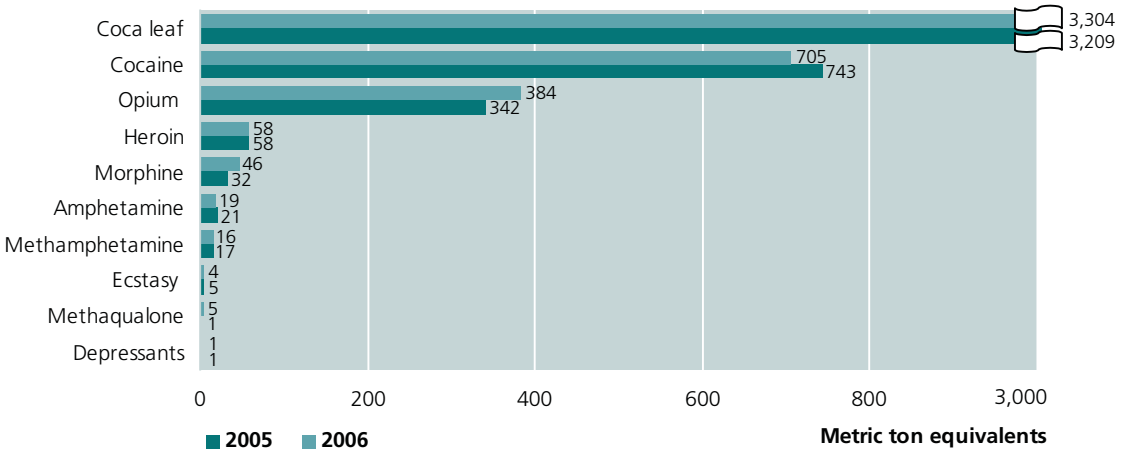
Drug seizure cases remain relatively stable

States Members reported 1.6 million drug seizure cases to UNODC for the year 2006, over 1.5 million cases a year earlier. At 65% of the total, cannabis accounted for the overwhelming majority of all seizure cases in 2006. Opiates accounted for 14%, coca for 9% and ATS for 7% of global seizures. Other drugs, including substances such as methaqualone, khat, various synthetic narcotics, LSD, ketamine, various non-specified psychotropic substances, and inhalants were 3% of overall seizures. Some of these substances (such as khat and ketamine) are not under international control, but are under national control in several States Members.

Largest quantities of drugs seized are cannabis, cocaine and opiates

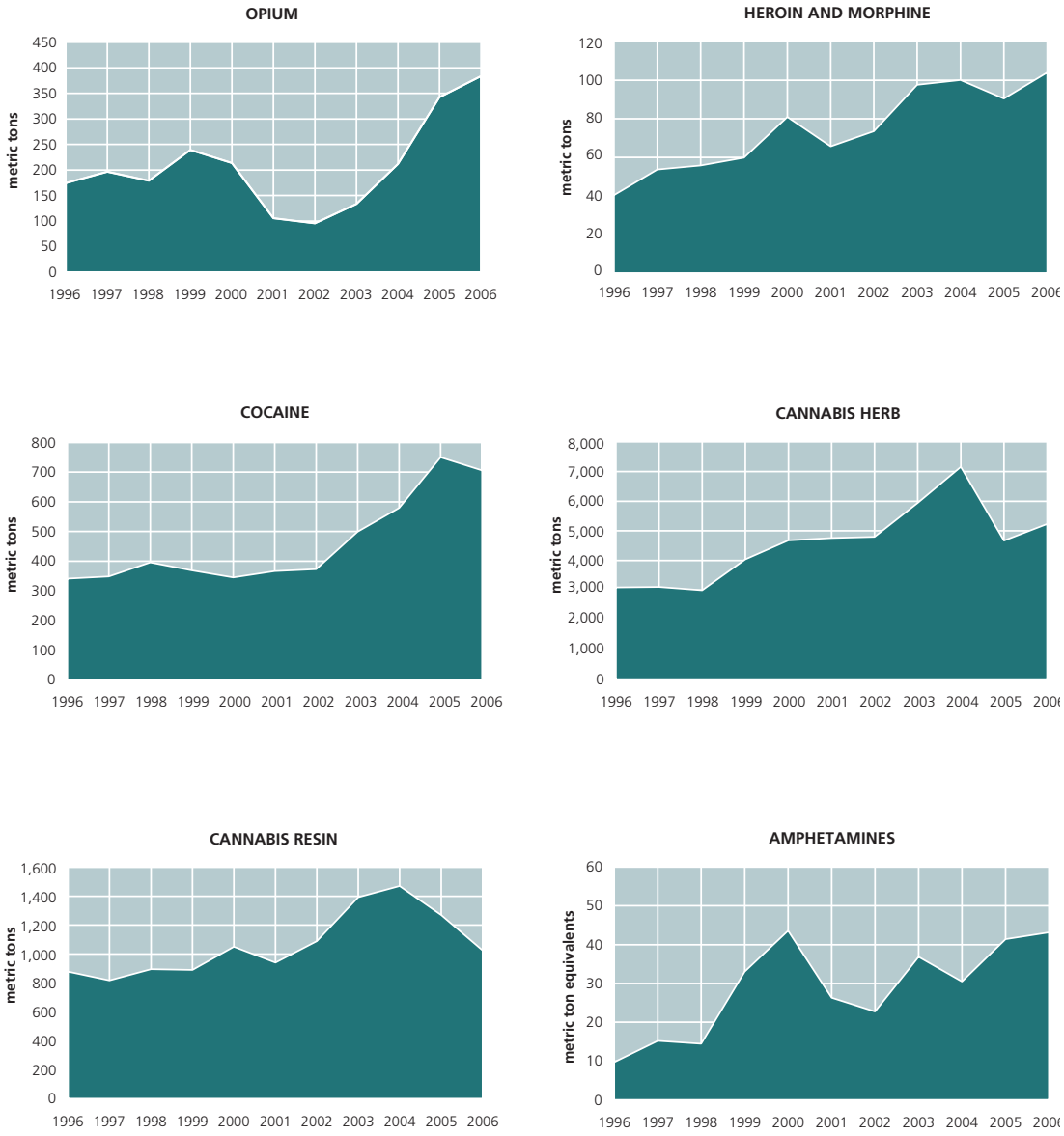
The largest seizures worldwide are for cannabis (herb and then resin), followed by cocaine, the opiates and ATS. Seizures for cannabis herb, the opiates and ATS grew year-on-year in 2006. The quantity of cannabis herb seized grew 12% to 5,200 mt in 2005, while the quantity of resin seizures declined by roughly 25% -

Fig. 3: Global drug seizures, excluding cannabis: 2005-2006



Source: UNODC, Government reports.

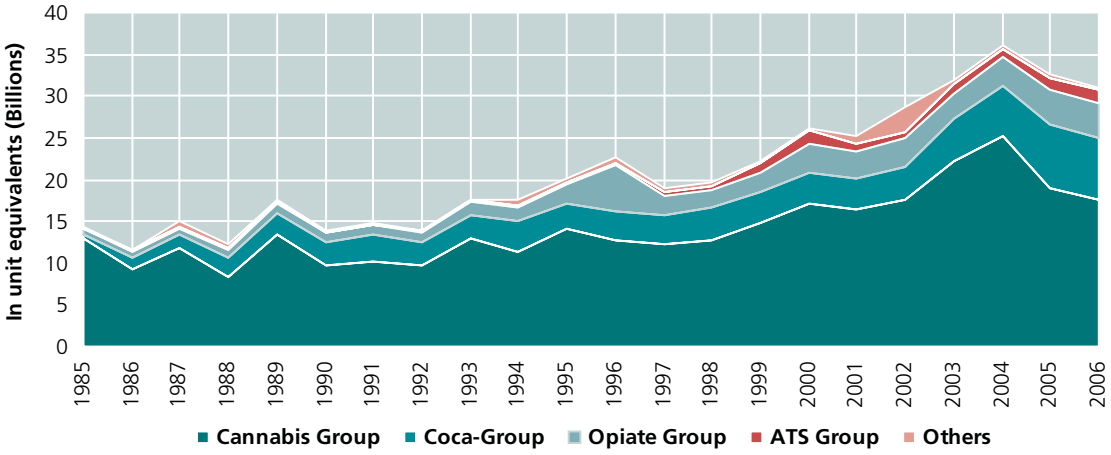
Fig. 4: Trends in the world seizures, 1996-2006



most likely still reflecting a decline in production in Morocco. Cannabis herb seizures, however, were 27% down compared to 2004 (their post 1998 peak). A significant decline in cannabis plants seized was recorded in 2006.

Seizures of opium and morphine grew 10% and 31% respectively in 2006, reflecting continued production increases in Afghanistan. There has, however, been a stabilization in heroin seizures in 2006. This may be the result of effective control of the precursor chemicals used in the refining of heroin, as well as overall opiate supply outstripping demand. Following five straight years of expansion, the quantity of cocaine seized fell by 5% in 2006. This is consistent with the stabilization of overall cocaine production over the 2004 to 2006 period. The quantities of amphetamine, methamphetamine and ecstasy seized were all down between 8% and 15% from 2005 to 2006. Overall ATS seizures, however rose by 2%, reflecting seizures of non-specified ATS and "captagon" tablets (which may contain amphetamine).

Fig. 5: Global drug seizures in 'unit equivalents': 1985 - 2006



Source: UNODC, Government reports.

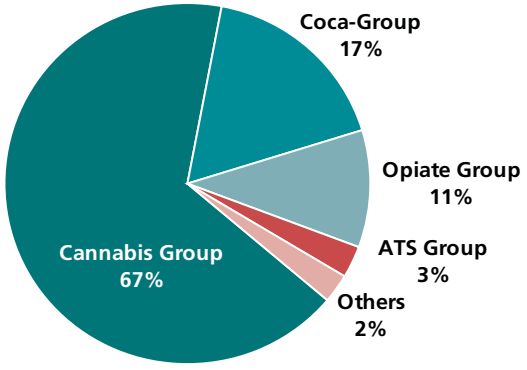
Drug seizures in unit terms continue their decline in 2006

As the quantities of different drugs are not directly comparable, it is difficult to draw general conclusions on overall drug trafficking patterns from them. Since the ratio of weight to psychoactive effects varies greatly from one drug to another (the use of one gram of heroin is not equivalent to the use of one gram of cannabis herb), the comparability of the data is improved if the weight of a seizure is converted into typical consumption units, or doses, taken by drug users. Typical doses tend, however, to vary across countries (and sometime across regions within the same country), across substances aggregated under one drug category (e.g. commercial and high-grade cannabis herb), across user groups and across time. There are no conversion rates which take all of these factors into account. Comparisons made here are based on global conversion rates, of milligrams per dose,[1] found in scientific literature or used among law enforcement agencies as basic rules of thumb. The resulting estimates should be interpreted with caution.

On this basis, global seizures were equivalent to some 31 billion units in 2006, down from 32.5 billion units a year earlier (-5%). The *World Drug Report 2007* argued that the decline of seizures in unit equivalents could not be attributed to reduced law enforcement activity but could probably be explained by the stabilization in global drug production and consumption. Data from 2006 seem to bear this out. With the exception of drugs in the opiates group, where seizures in unit equivalents have risen slightly, most other drug categories are stable or declining.

Cannabis makes up the largest proportion of drug seizures in unit equivalents, accounting for 67% of all seizures. The coca group accounts for 17% of drug seizures in unit equivalents. Coca seizures remain larger, on average, than seizures for the opiates or ATS group. The trade in this market is led by highly organized large criminal groups, enabling the trafficking of larger quantities of product through well established routes and using modern infrastructure. This enables efficiency gains which can then be attached to profit, or which can supplement product loss. One of the ways to understand the behaviour of criminal markets and transit and trafficking patterns is to look closely at how this indicator develops for each of the four main drug markets.

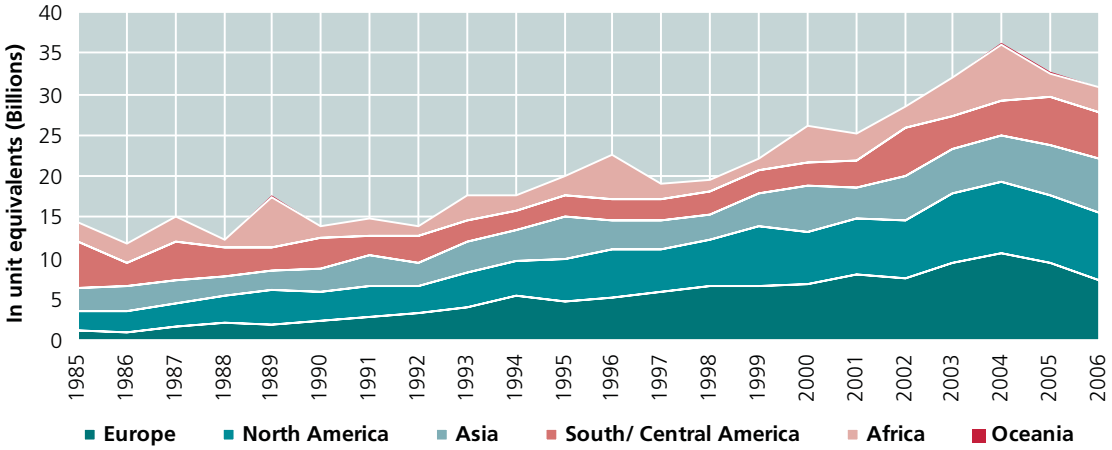
Fig. 6: Breakdown of seizures 'in unit equivalents': 2006 (N = 30.9 billion units)



Source: UNODC, Government reports.

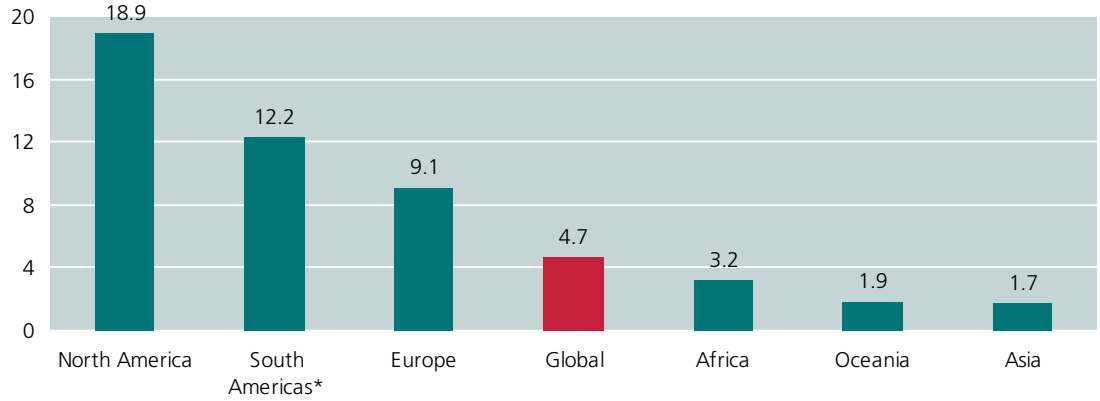
1 For the purposes of this calculation, the following typical consumption units (at street purity) were assumed: cannabis herb: 0.5 grams per joint; cannabis resin: 0.135 grams per joint; cocaine: 0.1 grams per line; ecstasy: 0.1 grams per pill, heroin: 0.03 grams per dose; amphetamines: 0.03 grams per pill; LSD: 0.00005 grams (50 micrograms).

Fig. 7: Regional breakdown of drug seizures in 'unit equivalents': 1985-2006



Source: UNODC, Government reports.

Fig. 8: Drug dosage units seized per inhabitant: 2006

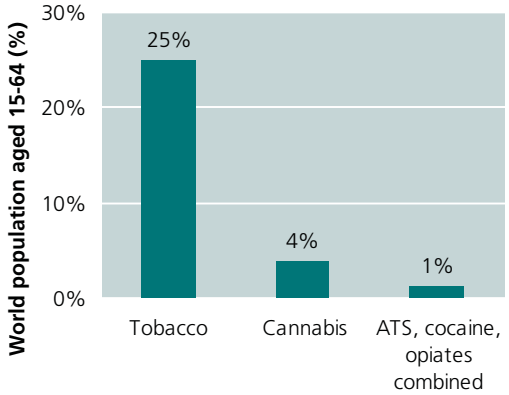


* South America, Central America, and the Carribean.
Source: UNODC, Government reports.

The bulk of all seizures remain concentrated in North America (27%), followed by Europe (23%), Asia (21%) and South America, Central America and the Caribbean (18%). Seizures declined in Europe and rose very slightly in Asia between 2005 and 2006.

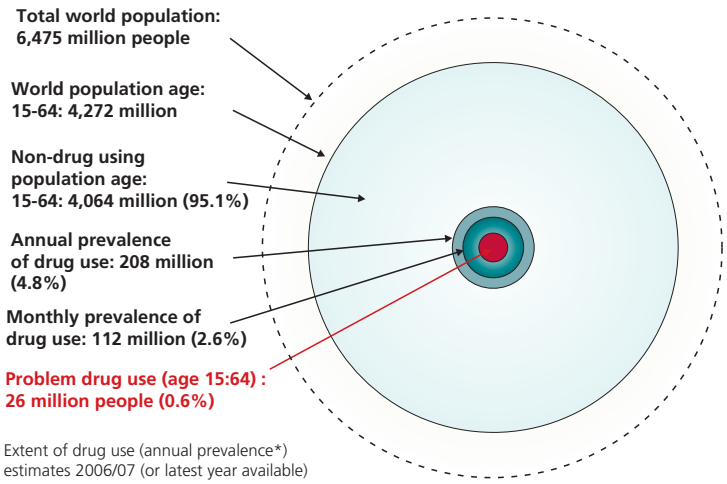
Per capita patterns have also remained the same year on year. The largest amounts of drugs per inhabitant are seized in North America (19 doses per inhabitant), followed by South America (including Central America and the Caribbean) (12.2 doses) and Europe (9 doses). The global average is 4.7 doses per inhabitant per year. Africa, Oceania and Asia are all below the global average.

Fig. 9: Use of illicit drugs compared to the use of tobacco (in % of world population age 15-64)



Source: UNODC, World Health Organization (WHO)

Fig. 10: Illegal drug use at the global level (2006/2007)



Annual prevalence of drug use stable at the global level

The proportion of drug users in the world population aged 15 to 64 has remained basically stable for the fourth straight year. It remains near the top end of the 4.7% to 5.0% range it has stabilized at since the late 1990s. Approximately 208 million people or 4.9% of the world's population aged 15 to 64 have used drugs at least once in the last 12 months. Problem drug use remains at about 0.6% of the global population aged 15 to 64.

With the exception of ATS, each market has seen some increase in the absolute numbers of drug users, but prevalence rates, where they have increased, have only done so marginally. The global annual prevalence rates for 2006/07 and 2005/06 were as follows: cannabis went from 3.8% to 3.9%, ATS from 0.60% to 0.58%, cocaine from 0.34% to 0.37%, opiates from 0.37% to 0.39% and heroin from 0.27% to 0.28%. None of these changes were statistically significant.

Cannabis, consumed by close to 166 million persons, continues to be the most prevalent of all illegal drugs used. While there was a year-on-year increase in the absolute number of drug users in this market, there was only a slight increase in the global annual prevalence rate (from 3.8% to 3.9% age 15 – 64).

There was no growth in the overall demand for amphetamines, the second most widely consumed group of substances. Over the 2006/07 period 25 million people are estimated to have used amphetamines (including methamphetamine) at least once in the previous 12 months, about the same as a year earlier. An estimated 9 million people used ecstasy over the 2006/7 period, up from 8.6 million in 2005/06.

Fig. 11: Prevalence of global drug use in the population age 15-64, late 1990s-2006/07

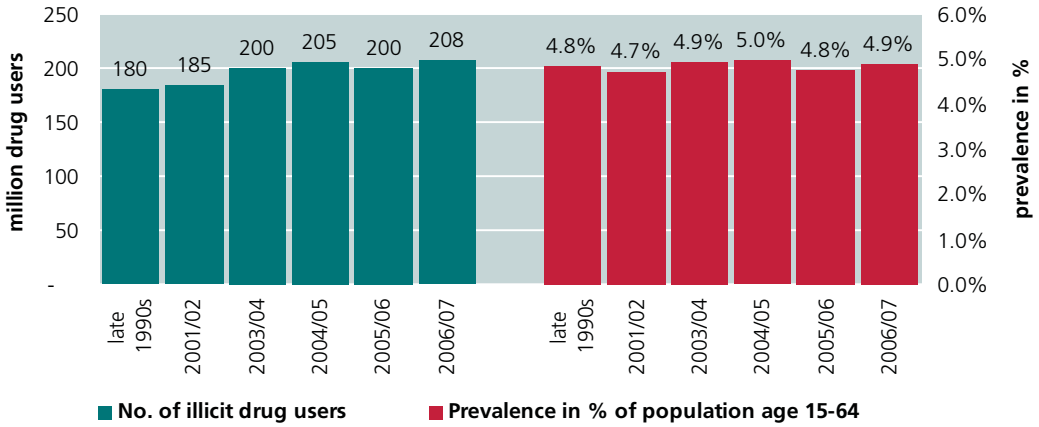
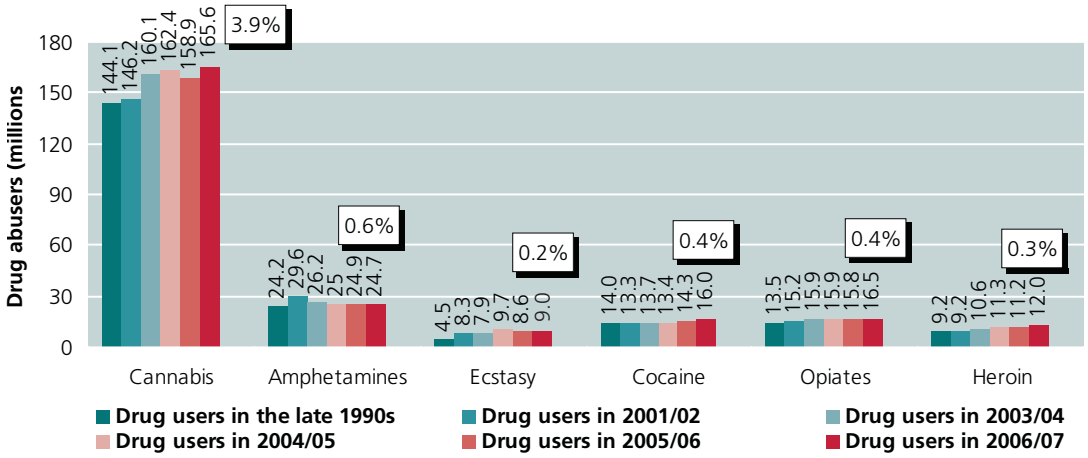


Fig. 12: Comparison of UNODC estimates of illicit drug use: late 1990s to 2006/2007



Sources: UNODC, Government reports, EMCDDA, CICAD, local studies.

Table 1: Extent of drug use (annual prevalence*) estimates: 2006/07(or latest year available)

	Canna-bis	Amphetamine-type stimulants		Cocaine	Opiates	of which is Heroin
		Amphetamines	Ecstasy			
Number of abusers (in millions)	**165.6**	**24.7**	**9**	**16**	**16.5**	**12.0**
in % of global population age 15-64	3.9%	0.6%	0.2%	0.4%	0.4%	0.3%

*Annual prevalence is a measure of the number/percentage of people who have consumed an illicit drug at least once in the 12-month period preceding the assessment.

Sources: UNODC, Government reports, EMCDDA, CICAD, local studies.

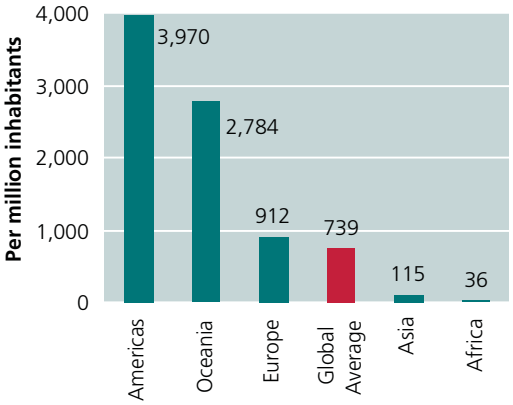
The number of opiates users rose to 16.5 million persons in 2006/07 due to higher estimates for Asia. The annual prevalence rate remained 0.4% of the global population aged 15 to 64. Out of these 16.5 million persons, 12 million or 0.3% of the population used heroin.

The number of cocaine users increased in 2006/07 to 16 million persons, raising the prevalence rate from 0.34% to 0.37% per cent at the global level.

Treatment demand continues to be highest in North America

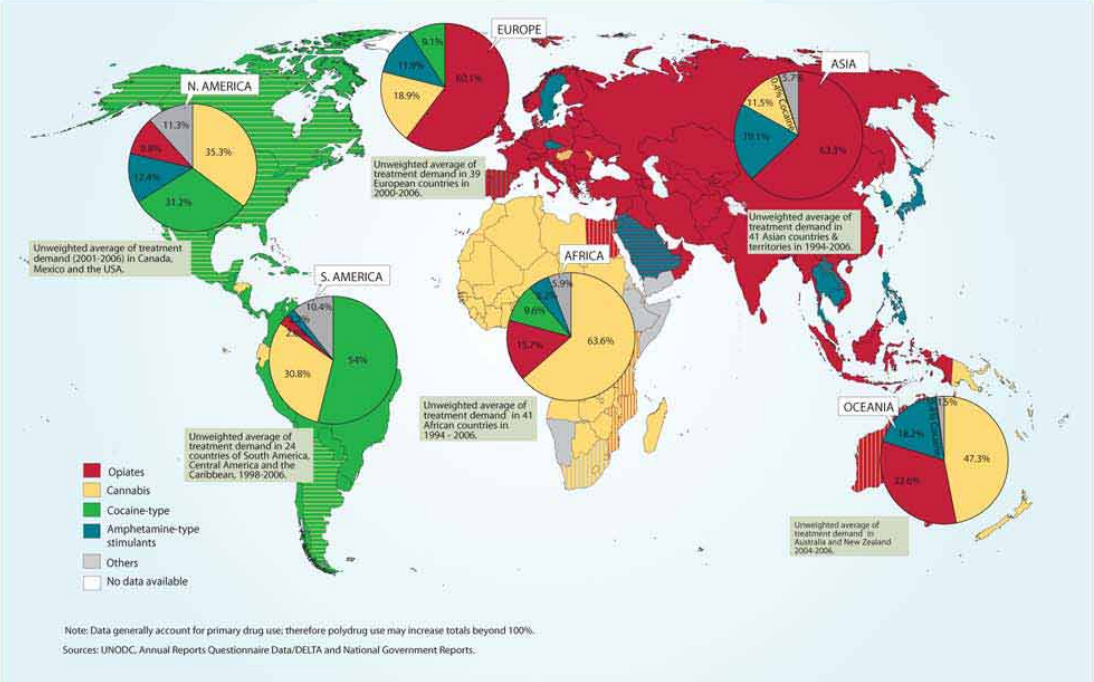
The demand for drug abuse treatment is an important indicator for assessing the world drug situation because it reveals the drugs categories which place the largest burden on national health systems. It should also be noted, however, that drug treatment, as a whole, remains under resourced or simply non-existent in most of the world. Drug users treated within comprehensive health and social welfare programmes remain the minority among the overall drug using population. The decline in treatment demand in North America, for example, could reasonably be related to a decline in use; however, in most of Asia and almost all of Africa, where treatment services are rare, treatment data would not be as strongly correlated with use.

Fig. 13: Drug treatment per million inhabitants: 2006 (N = 4.9 million)



Source: UNODC, Government reports.

Map 1: Main problem drugs (as reflected in treatment demand in 2006 (or latest year available)



Note: Data generally account for primary drug use; therefore polydrug use may increase totals beyond 100%.

Sources: UNODC, Annual Reports Questionnaire Data/DELTA and National Government Reports.

States Members reported a total of 4.9 million people under treatment for drug abuse to UNODC. Of the 26 million people (0.6% of the world's population age 15-65) estimated to be heavily drug-dependent, about one out of five are treated for their problem. The number of persons under treatment grew by 9% in 2006.

The bulk of treatment demand in Asia and Europe is related to opiates use.[2] Within Europe, treatment demand for opiates use is higher in Eastern Europe and lower in Western Europe. As new drugs have entered both markets, particularly the ATS group for both and cocaine for Europe, the proportion of opiate-related treatment in overall treatment demand has been declining in both regions since the late 1990s[3].

In South America, cocaine continues to account for most of the drug use related treatment demand with the proportion increasing from 48% in 2005 to 54% in 2006. As cocaine continues to make inroads into European markets, treatment demand there has increased as well, tripling over the last decade. Cocaine related treatment demand has remained largely stable in North America and Africa in 2006.

Most of the demand for drug related treatment in Africa is related to cannabis (63% in 2006). Treatment demand for cannabis has increased globally over the last decade. In 2006 it was the most prevalent reason for treatment in Africa, Oceania and North America. The availability of cannabis with higher levels of THC than in the past remains a cause for concern particularly among developed countries.

The proportion of ATS related treatment remains highest in Asia (19%), notably in East & South-East Asia and Oceania. ATS declined as a proportion of overall treatment demand in North America and rose slightly in Europe.

2 While some countries have a comprehensive treatment registry system, others only provide data from a few clinics. Simply adding up such numbers of people treated for specific substances would produce a strong bias in favour of the countries which have nationwide monitoring systems. In order to overcome this problem, the proportions at the country-level were first calculated and based on these results, the (unweighted) averages of the respective region were derived. The data shown are those reported for the year 2006. In case no data for a specific country were reported for 2006, data obtained in previous years were used instead.

3 The comparisons are based on treatment data statistics compiled and published in the *World Drug Report 2000*.

Fig. 14: Proportion of people in drug related treatment, by specific substance: 1997/98 and 2006*

* 2006 or latest year available; calculated as the unweighted average of countries reporting in a specific region; information based on reports from 40 countries in Asia; 38 countries in Europe, 27 countries in Africa; 24 countries in South America, Central America and the Caribbean, 3 countries in North America and 2 countries in the Oceania region.

Sources: UNODC, Government reports, EMCDDA, CICAD.

1.1.2 Outlook for the World Drug Markets

Long term stabilization

While there is every indication that all four drug markets have been contained over the long term, sustaining this will require increased international vigilance. There are many possible areas where this containment is vulnerable: a lessening of the vigilance and control provided by law enforcement, an expansion of supply and marketing techniques by organized criminal groups, insufficient prevention and treatment services provided by States Members. The list, in fact, could be quite extensive, which is why, following this period of stabilization, it is important to look to the elements which will make it sustainable.

Addressing the cultivation and production of opiates in Afghanistan is a long-term effort. The growth of opium in the southern part of the country has been extremely rapid and now there are indications that the cultivation of cannabis is increasing. Not much is known about this latest trend but, should it prove lucrative (price indicators are that it approaches opium in places) the country already has the markets and techniques to support a thriving industry. While there are early indications that the level of opium cultivation may decrease somewhat in 2008, this is not the time for complacency at the national or international level.

Although annual prevalence levels for all drugs are stable at the global level, patterns of abuse are shifting and consumption could increase in areas which are least equipped to deal with the associated costs and harms of abuse. It is likely that as new drug trafficking routes develop, new markets will develop alongside. There are indications that such routes have developed over the course of the last few years in West Africa, for example. Also, surpluses in supply – Afghan opiates being the predominant example – could create new preferences and new users. Local consumption of opiates, both in Afghanistan and Myanmar and their neighbouring countries, should receive greater attention in this respect.

Opiates

For the medium term, the opiates market is going to continue expanding and contracting on the basis of production in Afghanistan. While there are early signs that cultivation in Afghanistan may stabilize in 2008, the impact will be muted if the stabilization does not extend into the medium term. With the number of provinces where opium is cultivated decreasing, special attention should be paid to containing cultivation within the country.

While there is a likelihood that demand will increase in the short term, especially in the counties neighbouring Afghanistan and along some of the main trafficking routes, it is unlikely to keep pace with the expansion of supply. We have seen some price responsiveness in the local market, but it is too early to gauge the affect on farmers' planting decisions in the next season.

Cocaine

In the short term there is a danger that the increase in cultivation in 2007 could lead to an increase in production in 2008. As farmers try to increase yields on low yielding areas, new fields may be better attended in the future. The cocaine market is forecast to stabilize in the medium term as production levels and consumption continues to decline or flatten in the main markets of North America and Western Europe.

However, as demand in North America and Europe contracts there may be a development of new markets. These could develop along new trafficking routes, for example in West Africa, or in the South and Central American countries close to both transit areas and supply. Consumption of cocaine is still extremely limited in Asia, though it appears to be going up as levels of affluence increase. If availability increases in this region there is a danger that use could increase.

Cannabis

The cannabis market will continue as the predominant illicit drug market. This market has an extremely wide range of consumers, in terms of age, income, lifestyle, ethnicity, and nationality. This comprehsiveness probably will help the market to rebound if a contraction of demand were to take place in the main cannabis markets, as public messages and treatment demand increase the perception of risks associated with cannabis use. This is likely to happen, particularly amongst North American and European youth,

Unfortunately, even this is unlikely to stop increases in cannabis use in developing countries. Use in South West

Asia is likely to expand if resin production in Afghanistan continues to increase. The economic incentive to cultivate cannabis is increasing in Afghanistan. It is likely that in the medium term, with no countervailing measures, cannabis resin from Afghanistan may pick up some of the demand in Europe left short by the contraction of Moroccan supply.

ATS

The ATS market is likely to remain stable in the short term as demand reduction efforts continue in North America, South-East Asia and Europe, and as precursor control programmes are expanding. The market is vulnerable, however, in the medium to long term if production structures change significantly. As domestic and international law enforcement pressure increase, both small kitchen laboratories, which reduce risk through low investment, and large super labs, which increase profit through high volume production, could have an increasingly challenging time manufacturing. One way they could mitigate this is for distribution to become more organized and for manufacture and trafficking to become more sophisticated. This could lead to several new phenomena and the entrenchment of existing practice: i.e. the consolidation of smaller established consumer markets into larger units; increased multi-tiered, multi-ethnic supply and transit partnerships; the increased ability to access precursor chemicals; the clandestine manufacture of precursors out of legally available pre-precursors; and the expansion into markets with few resources to either detect or counter expansion.

1.2 Opium / Heroin market

1.2.1 Summary Trend Overview

The opium/heroin market continues to expand on the production side. Demand is stable overall but increases have occured in important areas. Overall, global cultivation remains just below 1998 levels.

The total area under illicit opium poppy cultivation increased by 17% in 2007 fuelled by increases in both Afghanistan and Myanmar. The cultivation increase in Afghanistan continued a six year trend and that of Myanmar reversed a six year trend. Both are cause for concern.

The opium/heroin market continues to be dominated by the large levels of cultivation and production in Afghanistan. While the very positive contraction in the number of opium producing provinces continued in 2007, market trends are not yielding much good news. In fact, the trends appear to indicate two negative developments including, first, some adaptation in trafficking routes to the concentration of cultivation in the South of Afghanistan and second, an increase in opiate consumption in and around Afghanistan.

The expansion of opium poppy cultivation brought the total area under cultivation in Afghanistan to a new high of 193,000 ha. At 17%, the year-on-year increase was less pronounced than in 2006. The number of households involved in opium cultivation is estimated to have increased 14% to 509,000. Between 2006 and 2007 the number of provinces affected by poppy cultivation fell from 28 to 21. In 2007, over two thirds of the opium poppy cultivation was located in the southern region of the country and 53% of it occured in the southern province of Hilmand alone. The six provinces which were free of poppy in 2006 remained so through 2007, during which an additional seven were identified, bringing the number of poppy-free provinces to 13.

With Afghanistan accounting for 82% of the global area under opium poppy cultivation, the contribution of the increase of cultivation in Myanmar to global levels was relatively small. However, it is the reversal of a declining trend which is important and which will have to be carefully monitored, on both the supply and demand side. Opium poppy cultivation in Myanmar increased by 29% in 2007. The estimated number of households involved in opium poppy cultivation in the Shan State in Myanmar increased 24%.

Global opium production also reached record levels in 2007. Led by production in Afghanistan, it increased to the highest annual level of production recorded in the last two decades. The contribution of Myanmar to overall production continued to be small due to a much lower yielding opium poppy. The total farmgate value of opium production in Afghanistan rose 32% to US$1 billion in 2007. The total export value of opiates to neighbouring countries is estimated to be around US$ 4 billion. The total potential production value of opium production in Myanmar increased 67% to US$120 million in 2007.

As opium production shifts towards the southern provinces of Afghanistan, it has become less convenient for traffickers to move opiates via the Silk route and trafficking along this route is declining while trafficking along the Balkan route has increased. Within the European part of the Balkan route close to 60% of all heroin and morphine seizures in 2006 were made in countries located along the West Balkan route, up from 8% in 1996.

Although there has been significant growth in the production of opiates in recent years, global consumption remains relatively stable, with only a marginal increase in annual prevalence: from 0.37 % of the population age 15-65 in 2005 to 0.39% in 2006. Use continues to be fairly stable in Europe and continues to decline in North America. Expansion has, however, been seen very clearly in the consumer markets in and bordering Afghanistan, and, to a certain extent along trafficking routes. In some of these markets injecting drug use is very prevalent and could pose a future challenge to resource strapped public services.

1.2.2 Production

Table 2: Global illicit cultivation of opium poppy and production of opium, 1990-2007

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
CULTIVATION[a] IN HECTARES																		
SOUTH-WEST ASIA																		
Afghanistan	41,300	50,800	49,300	58,300	71,470	53,759	56,824	58,416	63,674	90,583	82,171	7,606	74,100	80,000	131,000	104,000	165,000	193,000
Pakistan	7,488	7,962	9,493	7,329	5,759	5,091	873	874	950	284	260	213	622	2,500	1,500	2,438	1,545	1,701
Subtotal	48,788	58,762	58,793	65,629	77,229	58,850	57,697	59,290	64,624	90,867	82,431	7,819	74,722	82,500	132,500	106,438	166,545	194,701
SOUTH-EAST ASIA																		
Lao PDR	30,580	29,625	19,190	26,040	18,520	19,650	21,601	24,082	26,837	22,543	19,052	17,255	14,000	12,000	6,600	1,800	2,500	1,500
Myanmar	150,100	160,000	153,700	165,800	146,600	154,070	163,000	155,150	130,300	89,500	108,700	105,000	81,400	62,200	44,200	32,800	21,500	27,700
Thailand [b]	1,782	3,727	3,016	998	478	168	368	352	716	702	890	820	750					
Viet Nam [b]	18,000	17,000	12,199	4,268	3,066	1,880	1,743	340	442	442								
Subtotal	200,462	210,352	188,105	197,106	168,664	175,768	186,712	179,924	158,295	113,187	128,642	123,075	96,150	74,200	50,800	34,600	24,000	29,200
LATIN AMERICA																		
Colombia		1,160	6,578	5,008	15,091	5,226	4,916	6,584	7,350	6,500	6,500	4,300	4,153	4,026	3,950	1,950	1,023	714
Mexico [c]	5,450	3,765	3,310	3,960	5,795	5,050	5,100	4,000	5,500	3,600	1,900	4,400	2,700	4,800	3,500	3,300	5,000	
Subtotal	5,450	4,925	9,888	8,968	20,886	10,276	10,016	10,584	12,850	10,100	8,400	8,700	6,853	8,826	7,450	5,250	6,023	6,023
OTHER																		
Combined [d]	8,054	7,521	2,900	5,704	5,700	5,025	3,190	2,050	2,050	2,050	2,479	2,500	2,500	3,074	5,190	5,212	4,432	5,776
GRAND TOTAL	**262,754**	**281,560**	**259,686**	**277,407**	**272,479**	**249,919**	**257,615**	**251,848**	**237,819**	**216,204**	**221,952**	**142,094**	**180,225**	**168,600**	**195,940**	**151,500**	**201,000**	**235,700**
POTENTIAL PRODUCTION IN METRIC TONS OPIUM (e)																		
SOUTH-WEST ASIA																		
Afghanistan	1,570	1,980	1,970	2,330	3,416	2,335	2,248	2,804	2,693	4,565	3,276	185	3,400	3,600	4,200	4,100	6,100	8,200
Pakistan	150	160	181	161	128	112	24	24	26	9	8	5	5	52	40	36	39	43
Subtotal	1,720	2,140	2,151	2,491	3,544	2,447	2,272	2,828	2,719	4,574	3,284	190	3,405	3,652	4,240	4,136	6,139	8,243
SOUTH-EAST ASIA																		
Lao PDR	202	196	127	169	120	128	140	147	124	124	167	134	112	120	43	14	20	9
Myanmar	1,621	1,728	1,660	1,791	1,583	1,664	1,760	1,676	1,303	895	1,087	1,097	828	810	370	312	315	460
Thailand [b]	20	23	14	17	3	2	5	4	8	8	6	6	9					
Viet Nam [b]	90	85	61	21	15	9	9	2	2	2								
Subtotal	1,933	2,032	1,862	1,998	1,721	1,803	1,914	1,829	1,437	1,029	1,260	1,237	949	930	413	326	335	469
LATIN AMERICA																		
Colombia		16	90	68	205	71	67	90	100	88	88	80	52	50	49	24	13	14
Mexico [c]	62	41	40	49	60	53	54	46	60	43	21	91	58	101	73	71	108	
Subtotal	62	57	130	117	265	124	121	136	160	131	109	171	110	151	122	95	121	121
OTHER																		
Combined [d]	45	45	-	4	90	78	48	30	30	30	38	32	56	50	75	63	16	38
GRAND TOTAL	**3,760**	**4,274**	**4,143**	**4,610**	**5,620**	**4,452**	**4,355**	**4,823**	**4,346**	**5,764**	**4,691**	**1,630**	**4,520**	**4,783**	**4,850**	**4,620**	**6,610**	**8,870**
									HEROIN									
Potential HEROIN [f]	**376**	**427**	**414**	**461**	**562**	**445**	**436**	**482**	**435**	**576**	**469**	**163**	**452**	**478**	**495**	**472**	**606**	**733**

(a) Opium poppy harvestable after eradication.

(b Due to small production, cultivation and production were included in the category "Other", for Viet Nam as of 2000 and for Thailand as of 2003.

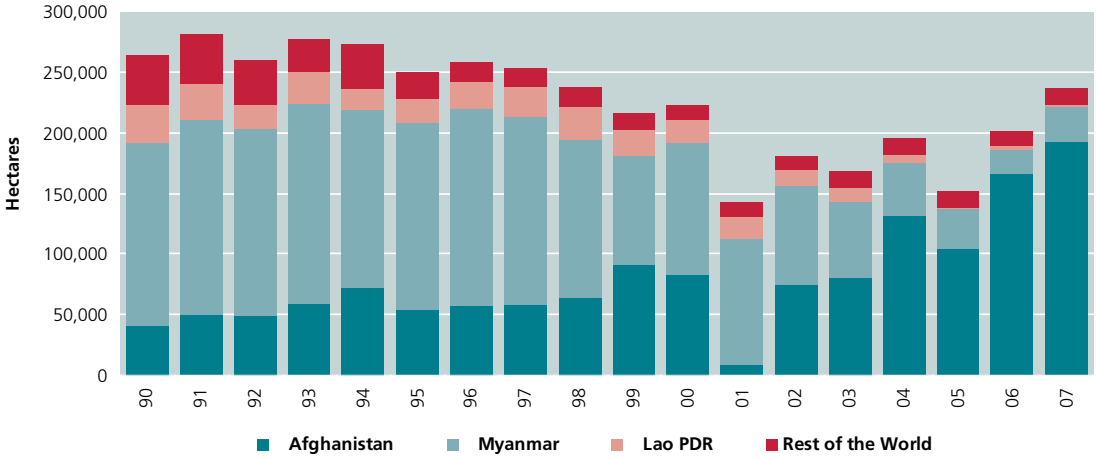
(c) Figures derived from US Government surveys. In 2006, the Government of Mexico reported a gross opium poppy cultivation of 19,147 hectares and estimated potential gross opium production at 211 mt. These gross figures are not directly comparable to the net figures presented in this table.

(d) Includes countries such as Russian Federation, Ukraine, Central Asia, Caucasus region, other C.I.S. countries, Balkan countries, Baltic countries, Guatemala, Peru, Viet Nam (as of 2000), Thailand (as of 2003), India, Egypt, Lebanon and Iraq.

(e) All figures refer to dry opium.

(f) Heroin estimates for Afghanistan are based on the Afghanistan Opium Surveys (since 2004). For other countries, a 10:1 ratio is used for conversion from opium to heroin.

Fig. 15: Global opium poppy cultivation (hectares), 1990-2007



Global area under poppy cultivation increases in 2007

The total area under illicit opium poppy cultivation increased by 17% in 2007. Although the increase was led by an expansion of cultivation in Afghanistan, opium poppy cultivation also increased in Myanmar after six consecutive years of decline. Global cultivation remains lower than annual levels for 1990 through 1998 at just below its 1998 level.

In 2007, opium poppy cultivation in Afghanistan expanded to the largest area ever recorded, surpassing the 2006 record cultivation figure by 28,000 ha. At 17%, the year-on-year increase was less pronounced than in 2006. The total area under cultivation in the country was 193,000 ha in 2007. The number of households involved in opium cultivation is estimated to have increased 14% to 509,000. Similar to the year before, Afghanistan accounted for 82% of the global area under cultivation. Sharp increases in cultivation occurred in the South, West and East, and significant decreases took place in the North and North-East of the country. Cultivation is increasingly concentrated in certain regions of the country, a trend which began over the last few years. Between 2006 and 2007 the number of provinces affected by poppy cultivation fell from 28 to 21. In 2007, over two thirds of the opium poppy cultivation was located in the southern region of the country and 53% of it occurs in the southern province of Hilmand alone. Provinces which were found to be free of poppy in 2006 remained so through 2007, when an additional 7 were identified, bringing the number of poppy-free provinces to 13.

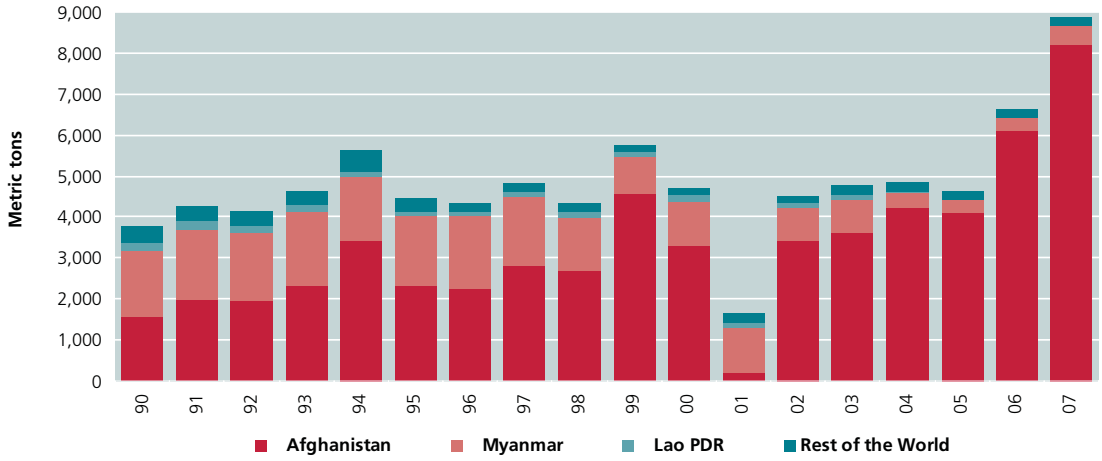
In Pakistan, where opium poppy is grown in the Afghan-Pakistan border region, a cultivation increase of 10% to around 1,700 ha was reported.

After six years of decline, overall opium poppy cultivation in South-East Asia increased by 22% on the strength of a 29% increase in Myanmar to 27,700 ha. Despite this recent increase, opium poppy cultivation in South-East Asia decreased by 82% since 1998. While some areas in Myanmar such as the Wa region remained opium poppy free, cultivation in the East and South of the Shan State, where the majority of opium poppy cultivation takes place, increased significantly. The estimated number of households involved in opium poppy cultivation in the Shan State increased 24%. In the Lao PDR, opium poppy cultivation is spread over the northern provinces but remained at a low level, falling to 1,500 ha in 2007. Bangladesh, India, Thailand and Viet Nam all continue to report eradication of small amounts of illicit opium poppy cultivation.

In the Western Hemisphere, the illicit opium markets are primarily supplied from North and South America. The Government of Colombia estimates the area under opium poppy cultivation fell to about 714 ha in 2007. Opium poppy cultivation in Peru is difficult to quantify as the UNODC supported national illicit crop monitoring system has not yet established a reliable methodology for the detection of the crop. The Government of Mexico reported gross cultivation of opium poppy to have reached 19,147 ha in 2007. Due to the country's eradication efforts, however, net cultivation is thought to have been successfully reduced to several thousand hectares. Eradication reports indicate that opium poppy is also cultivated in Guatemala.

Very low levels of cultivation continue to take place in many other regions and countries such as the Russian Federation, Ukraine, Central Asia, the Caucasus region, other C.I.S. countries, Balkan countries, Baltic countries, Egypt, Lebanon and Iraq.

Fig. 16: Global opium production (metric tons), 1990-2007



Opium production reaches a new record high

Global opium production reached record levels in 2007: led by production in Afghanistan, it increased for a second year in a row to 8,870 mt. This is by far the highest annual level of production recorded in the last two decades and roughly double the annual average for that period. This is related to the shift in cultivation from Myanmar to Afghanistan which has taken place over the same period. In the latter country, opium farmers achieve more than two and a half times the per hectare yield. In 2007, Afghanistan alone accounted for 92% of global production, producing 8,200 mt of opium at an average yield of 42.5 kg/ha. In Myanmar, opium production increased by 46% from 315 mt to 460 mt due to the combined effects of cultivation increases and higher yields. However, opium production in Myanmar represented only 5% of global production in 2007.

The total farmgate value of opium production in Afghanistan rose 32% to US$1 billion dollars in 2007 on the strength of the enormous increase in production. Total export value of opiates to neighbouring countries is thought to be around US$4 billion. The total production value of opium production in Myanmar increased 67% to US$120 million in 2007.

Price responsiveness increases in Afghanistan

Prices in Afghanistan may finally be responding to the enormous increases in supply witnessed over the last years. Farmgate prices for dry opium reached their lowest annual average since the opium ban in 2001, declining by 21% from US$ 140/kg in 2006 to US$ 111/kg in 2007. Regional price differences continued to exist in the country but were less pronounced than in 2006. Regional prices seem to be corroborating the observation that there is greater price responsiveness in the country. Trader prices in the northern and western regions remained relatively stable and did not fall as much as in the South. The eastern region recorded a significant post-harvest price decrease and prices began to converge at Southern price levels. This is the opposite of what was observed in 2006 when monthly price differences of US$ 100/kg between the South and the East were reported.

Opium prices in Myanmar continued to increase. Prices rose 11% from US$ 230/kg in 2006 to US$ 256/kg in 2007. This increase was lower than in 2006, when farmgate prices increased by 23%. Prices for Lao PDR and Thailand indicated that recent production increases in Myanmar were not offsetting the scarcity of opium on local illicit markets. Prices increased 77% to US$ 974/kg in the Lao PDR. In Thailand prices reached US$ 1,071/kg in 2007.

Afghanistan, the Russian Federation and the Republic of Moldova continue to destroy the most opiates laboratories

In 2006, 619 opiates producing laboratories[1] were destroyed. Afghanistan (269), the Russian Federation (225) and the Republic of Moldova (112) reported seizing and dismantling the majority of these labs. Laboratories in the Russian Federation and the Republic of Moldova tend to produce acetylated opium from locally cultivated opium poppy straw, whereas laboratories in Afghanistan produced morphine and heroin. The destruction of opium/heroin laboratories was also reported by Myanmar (10), which has domestic opium production, SAR Hong Kong (2), and India (1), where

1 Unfortunately, while UNODC has information on the number of laboratories, information on the importance or size of the installation destroyed is often unavailable.

eradication reports confirm the existence of opium poppy cultivation. For the year 2006 the authorities of Pakistan reported the dismantling of 8 clandestine laboratories close to the Afghan border in Baluchistan.

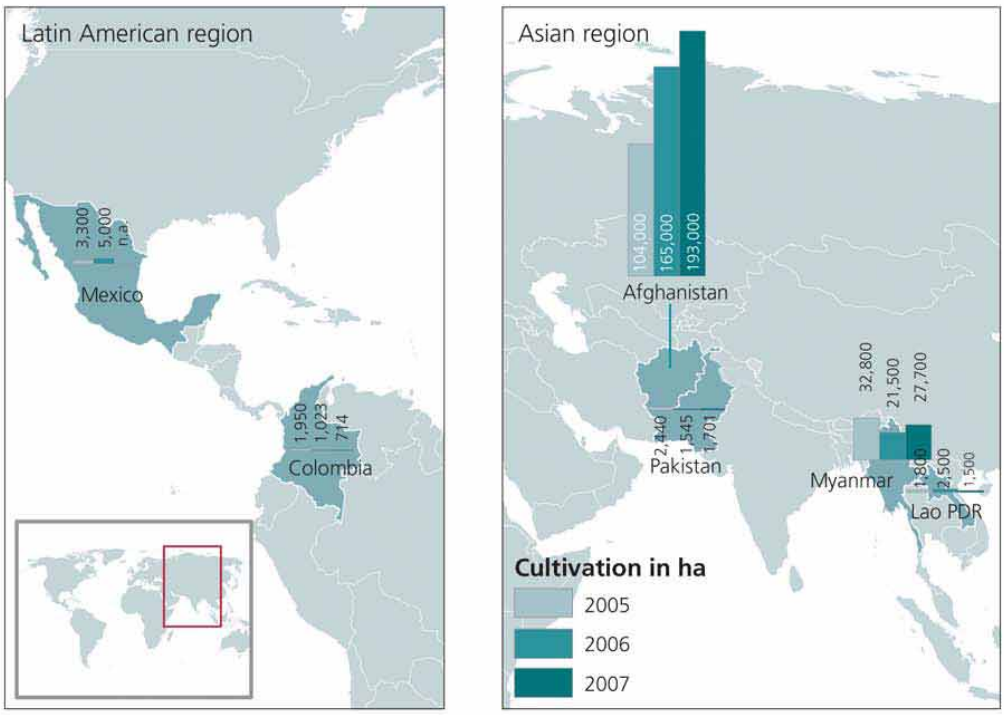
Illicit morphine and heroin producers in Afghanistan need large quantities of the chemical precursor acetic anhydride to refine their drugs. Given the high number of laboratories dismantled in Afghanistan and the virtual disappearance of heroin laboratories from the statistics of countries along the main trafficking routes, the demand for this chemical must be high. As it is not produced locally and as the country has no legitimate requirement of it, it is regularly smuggled into the country. Seizures of acetic anhydride in the countries neighbouring Afghanistan are rare, although the demand for the substance is thought to have increased proportionally to the increase in opium production. The exception to this is China which has reported seizures of the chemical since 2005. In 2007, for example, the country again stopped an order for a shipment of 80 mt of acetic anhydride.

Table 3: Significant opium poppy eradication reported (hectares), 1995-2007

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Afghanistan	–	–	–	–	400	121	–	–	21,430	*	5,103	15,300	19,047
Colombia	3,466	6,885	6,988	2,901	8,249	9,254	2,385	3,577	3,266	3,866	2,121	1,929	–
Egypt	–	–	–	–	–	–	–	15	34	65	45	50	–
Guatemala	–	–	–	–	–	–	–	–	–	–	489	720	449
India	–	–	29	96	248	153	18	219	494	167	12	247	7,753
Lao PDR	–	–	–	–	–	–	–	–	4,134	3,556	2,575	518	779
Lebanon	–	–	–	–	–	–	–	–	4	67	27	–	–
Mexico	15,389	14,671	17,732	17,449	15,461	15,717	15,350	19,157	20,034	15,926	21,609	16,890	11,046
Myanmar	3,310	1,938	3,093	3,172	9,824	1,643	9,317	7,469	638	2,820	3,907	3,970	3,598
Pakistan	–	867	654	2,194	1,197	1,704	1,484	–	4,185	5,200	391	354	614
Peru	–	–	–	4	18	26	155	14	57	98	92	88	88
Thailand	580	886	1,053	716	808	757	832	507	767	122	110	153	220
Venezuela	1,480	51	266	148	137	215	39	0	0	87	154	0	–
Vietnam	477	1,142	340	439	–	426	–	125	100	32	–	–	38

* Although eradication took place in 2004, it was not officially reported to UNODC.

Map 2: Opium poppy cultivation, 2005-2007



Map 3: Opium poppy production, 2005-2007

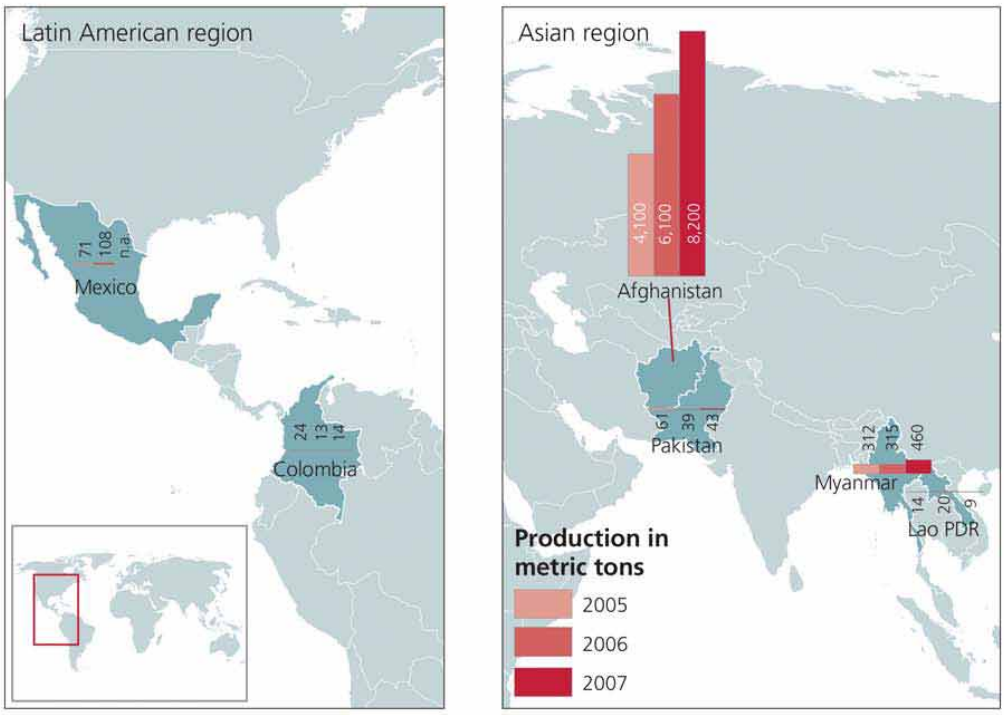


Fig. 17: Annual opium poppy cultivation and opium production in main producing countries, 1990-2007

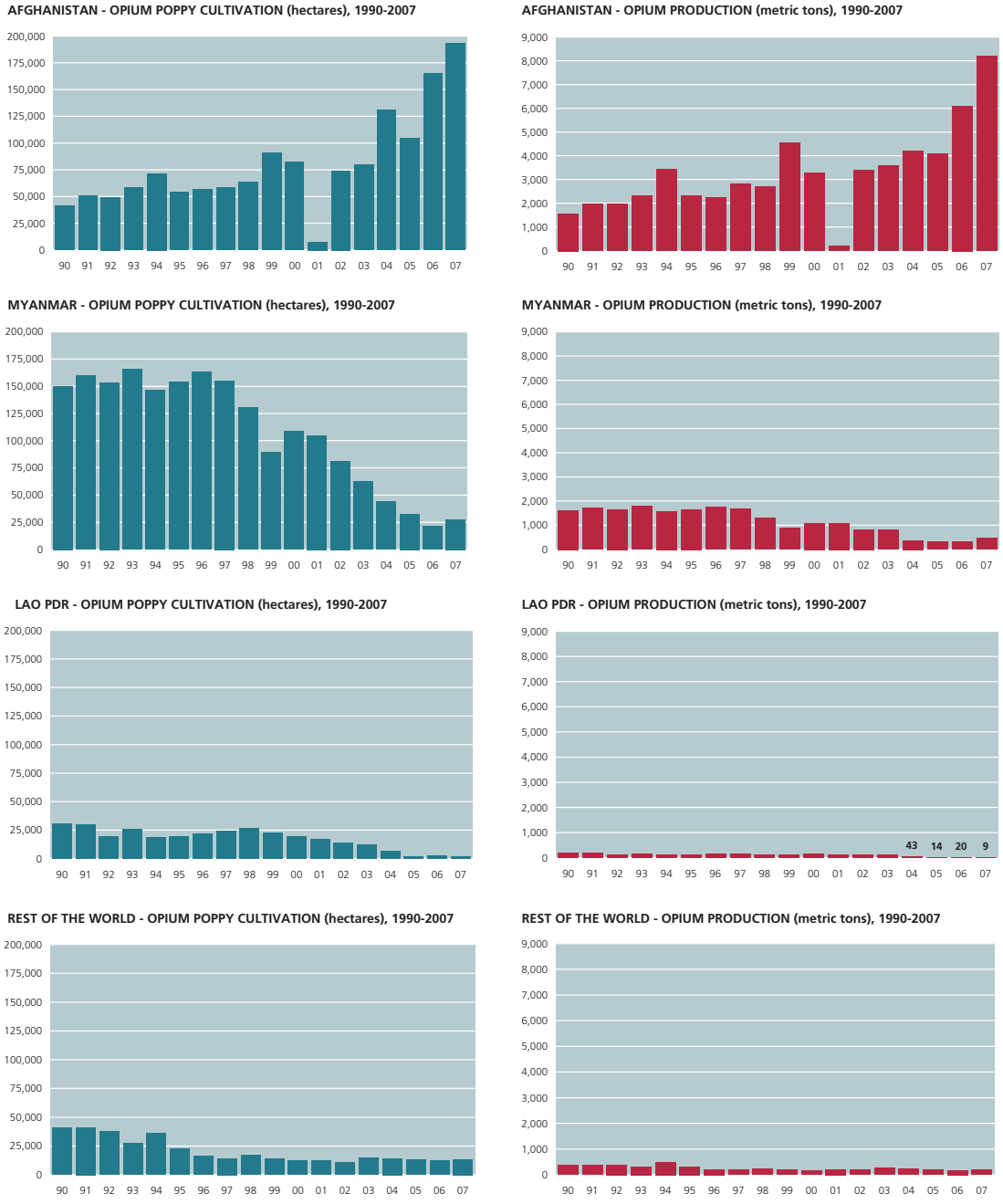


Fig. 18: Opium poppy cultivation

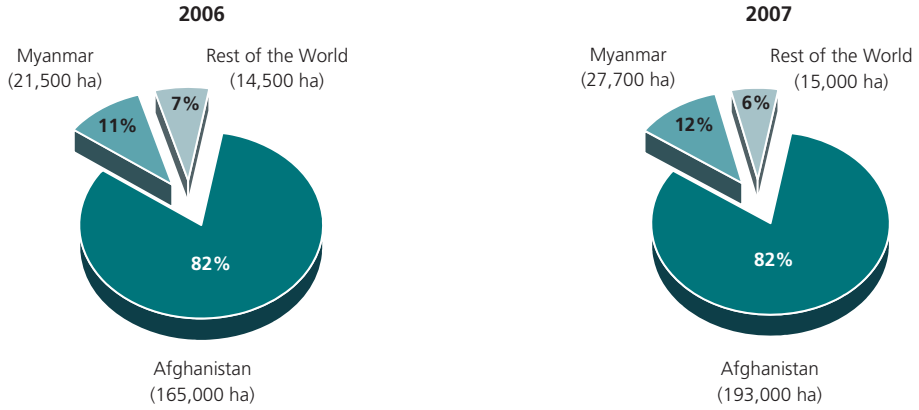
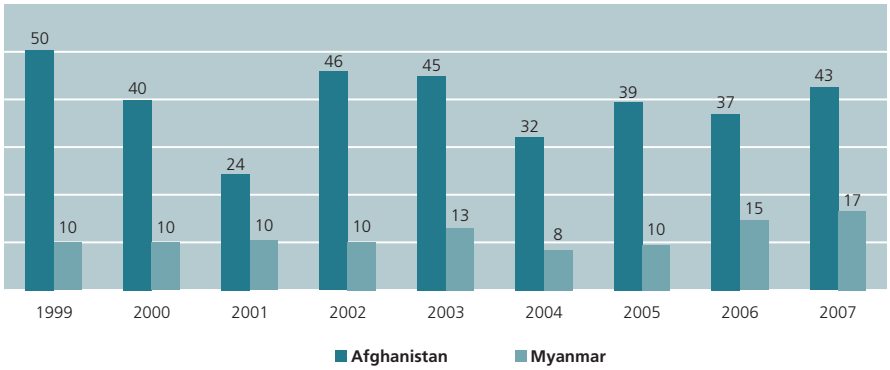
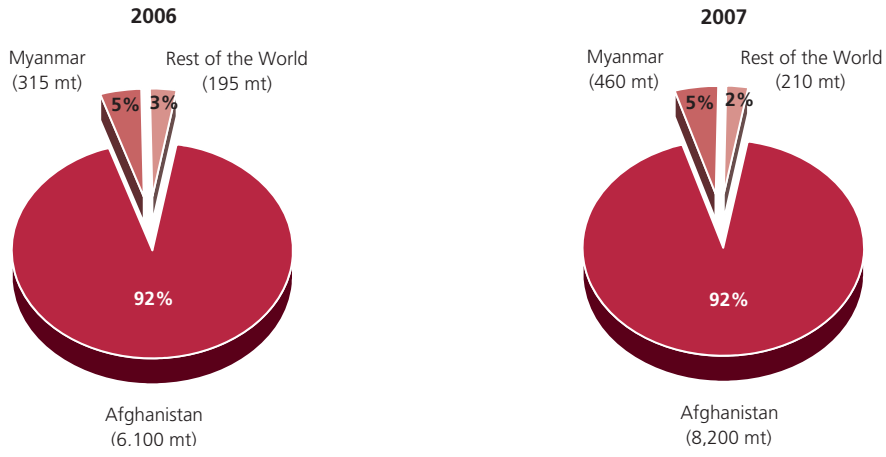


Fig. 19: Opium yields in Afghanistan and Myanmar (kg/ha), 1999-2007



Differences in opium yield between Afghanistan and Myanmar are due to differences in opium poppy varieties and growing conditions. Variations of yields from year to year in the same country are mostly caused by changes in weather conditions and/or, as in the case of Afghanistan in 2001, by a shift in the relative distribution of cultivation from irrigated to rain-fed land.

Fig. 20: Opium production



1.2.3 Trafficking

Opiate seizures increased and heroin seizures remained stable in 2006

Out of 152 countries providing seizure statistics to UNODC for the year 2006, 126 countries (83%) reported seizures of opiates. Opium seizures were reported by 57 countries (38% of all reporting countries), morphine by 36 countries (24%) and heroin by 122 countries (80%). Thus more countries reported opiates seizures than seizures for cocaine (78%), the amphetamine-type stimulants (65%; amphetamines: 55%; ecstasy: 51%) or depressants, mainly benzodiazepines and barbiturates (33%).

Global opiate seizures, expressed in heroin equivalents,[1] increased 14% to 142 mt in 2006. Opiates seizures have grown an average of 9% per year over the last decade, exceeding growth in global opium production. The global interception rate for opiates rose from 13% in 1996 to 23% in 2006.

Global opium seizures amounted to 384 mt in 2006, up 12% on a year earlier. Opium seizures were concentrated in Iran (81% of the total), Afghanistan (11%), Pakistan (2%) and Myanmar (2%).

Global morphine seizures amounted to 46 mt, up 45% on a year earlier. Most morphine seizures took place in Pakistan (70%) and Iran (23%). This suggests that important amounts of heroin are produced outside Afghanistan, as morphine does not have a large user base. The Pakistan authorities reported the dismantling of 8 heroin laboratories in 2006, the first identified laboratories since 1997.

Global heroin seizures amounted to 58 mt, about the same as a year earlier (-1%). The world's largest heroin seizures in 2006 were reported by Iran (10.7 mt or 19% of global heroin seizures), followed by Turkey (10.3 mt or 18%), China (5.8 mt or 10%), Afghanistan (4 mt or 7%), Pakistan (2.8 mt or 5%), the Russian Federation (2.5 mt or 4%) and Tajikistan (2.1 mt or 4%). The countries of West and Central Europe seized 8.4 mt or 14% of the total; the countries of North America seized 2.2 mt or 4% of the total.

While the increases in opium and morphine seizures are linked to growing opium production in Afghanistan, the stabilization in global heroin seizures over the 2004-2006 period (-5%) is thought to be linked to a combination of supply side factors. Amongst these could be: the impact of opium stock-piling (possible as price leverage) some successes in dismantling clandestine heroin laboratories (mostly in Afghanistan); and, improvements in precursor control.

The international rescheduling of acetic anhydride, the key precursor for heroin manufacture, from a Table II to a Table I substance a few years ago tightened international control. States Members are now obliged to supply export notifications from the competent authorities of the exporting country when the chemical is traded. Also, various international co-operations efforts (such as Project Cohesion or Operation Trans-shipment in 2006) may have raised awareness in the commercial sector, reducing the readiness of companies to provide huge quantities of acetic anhydride to unknown and suspicious customers. Indications that this has been successful can be found on the supply side of the opiates market itself. While acetic anhydride is still available in Afghanistan, its price has increased markedly over the last two years. Although actual seizures of this precursor remained negligible in the countries bordering Afghanistan,[2] the increasing price signals that laboratory operators are experiencing shortages of the chemical.

Concentration of seizures close to production centers

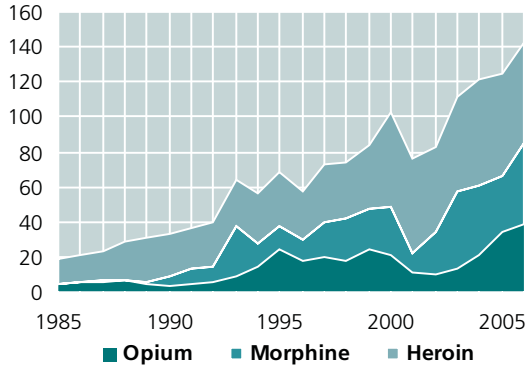
About 80% of global opiate seizures were made in Asia in 2006, 17% in Europe and 3% in the Americas. The most important sub-region for opiate seizures was South-West Asia, which accounted for 69% of global opiate seizures.

The bulk of global opiate seizures takes place in the countries surrounding Afghanistan: South-West Asia, South- and Central Asia together accounted for 73% of global opiate seizures in 2006. When Europe is included, these regions made 90% of the global total in 2006. This figure has risen steadily in line with Afghanistan's share in global opium production, from 77% in 2002 and 86% in 2005. Most of the remaining opiate seizures

1 For the purposes of this calculation it is assumed that 10 kilograms of opium are equivalent to 1 kilogram morphine or 1 kilogram of heroin.

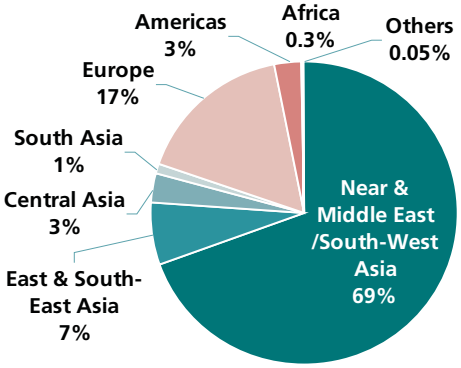
2 INCB, *2007 Precursors and Chemicals frequently used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances,* New York 2008.

Fig. 21: Global opiate seizures, expressed in heroin equivalents*, by substance, 1985-2006



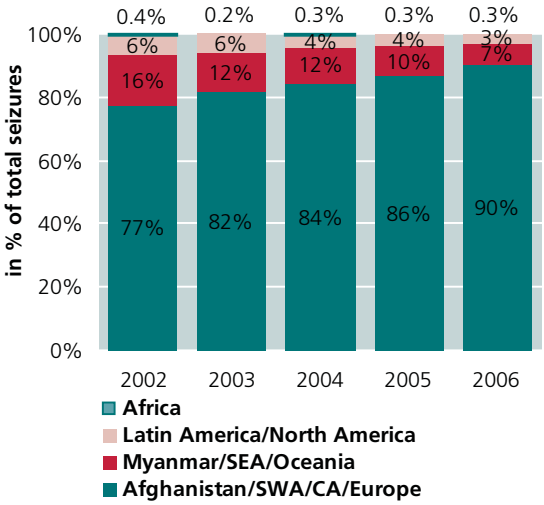
* based on a conversion rate of 10 kilograms of opium for 1 kg of morphine or 1 kg of heroin.
Source: UNODC, Annual reports Questionnaire Data / DELTA.

Fig. 22: Regional breakdown of global opiate seizures in 2006; (N = 142 mt expressed in heroin equivalents)



* For the purposes of this calculation it is assumed that 10 kilograms of opium are equivalent to 1 kilogram of morphine and 1 kilogram of heroin.
Source: UNODC, Annual Reports Questionnaire Data / DELTA

Fig. 23: Distribution of opiate seizures (expressed in heroin equivalents*), 2002-2006



* applying a conversion ratio of 10 kg of opium equivalent to 1 kg of morphine and 1 kg of heroin.
Source: UNODC, Annual reports Questionnaire Data / DELTA.

(7%) are made in the East & South-East Asia / Oceania sub-regions. The Americas accounted for 3% of the global total and Africa for 0.3%.

Seizures rise with the expansion of markets and the development of trafficking routes in South-West Asia, South Asia and South-East Europe

In 2006, opiate seizures continued to increase in South-West Asia (+25%) and South Asia (+23%), as well as in South-East Europe (+26%). They also grew in Africa (+8%) and in West and Central Europe (+6%).

Opiate seizures increased only slightly in Central Asia (3%). In 2006, seizures in this region were 40% lower than at their peak in 2003. This is likely the result of the shift in opium production towards the southern provinces of Afghanistan making it less convenient to traffic opiates via the Silk route. Opiate seizures reported by countries of East Europe (which obtained most of their opiates via the Silk Route) fell by 48% in 2006. In parallel, the Russian authorities reported a marked decline of heroin availability on the Russian market.

Seizures fall in East and South-East Asia, the Oceania region and the Americas

Opiates seizures also continued to fall in East and South-East Asia (-22% in 2006 after -14% in 2005). This mirrored the decline in opium production in Myanmar and Laos in 2006 and previous years. Opiate seizures also declined markedly in the Oceania region (-57% in 2006).

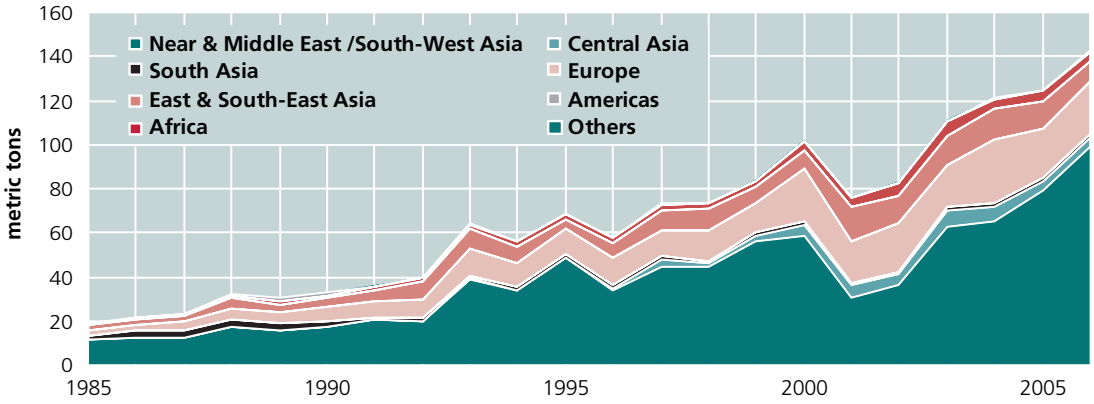
In 2006, opiates seizures in the Americas fell by 11% and were 39% lower than at their peak in 2003. This correlates with the declining opium production in the countries of South America. More than half of all American opiate seizures were made by countries in North America. Seizures in North America declined by 3% in 2006 and were 46% lower than at their peak in 2003.

Trafficking in opiates continues along three major routes

There are three production centres for opiates which supply three distinct markets. The main trafficking flows are as follows:

- from Afghanistan, the world's largest opium producer, to neighbouring countries of South, South West

Fig. 24: Global opiate seizures, expressed in heroin equivalents*, regional breakdown, 1985-2006



* For the purposes of this calculation it is assumed that 10 kilograms of opium are equivalent to 1 kilogram of morphine and 1 kilogramme of heroin.
Source: UNODC, Annual Reports Questionnaire Data / DELTA

and Central Asia, the Middle East, Africa and, in particular, to Europe;

- from Myanmar/Laos to neighbouring countries of South-East Asia, (notably China) and to the Oceania region (mainly Australia);
- from Latin America (Mexico, Colombia, Guatemala and Peru) to North America (notably USA)

Recently, new distribution patterns are developing which blur some of these transit corridors, i.e. shipments of heroin from Afghanistan via Pakistan to China and shipments of heroin from Afghanistan via Central Asia to China. This has partly offset the decline in heroin from Myanmar into China. In 2006 the Pakistan authorities reported 137 seizures of heroin (transported mainly by air), destined for China – this is a large increase on 20 such seizures in 2005 and two in 2004.

Similarly, the Chinese authorities reported 18 seizures involving heroin trafficked into China via Pakistan, up from eight in 2005 and none in 2004. A rather high proportion of third country foreigners (mostly from West Africa) were involved (9% of the persons arrested in Pakistan and 33% of the persons arrested in China). The total volume of these seizures was still small (132 kg in 2006 out of 2.8 mt of heroin seized in Pakistan and 62 kg out of 5.8 mt seized in China) but the shipments indicate the development of emerging routes and changes in market supply chains.[3]

Although the availability of heroin from Afghanistan remains very low in North America, there are some indications that opiates from Afghanistan are beginning to make their way to the USA and Canada, both directly from Afghanistan and via Pakistan and India. Canada reports 83% of the heroin seized on its market in 2006 originated in South-West Asia.

The majority of opiates continue to be transported along the Balkan route to Western Europe

The bulk of all opiates continue to leave Afghanistan via Iran and Pakistan. UNODC estimates suggest that in 2006, 53% of all opiates left Afghanistan via Iran, 33% via Pakistan and 15% via Central Asia (mainly via Tajikistan). Most of the opium exports were destined for Iran.[4] In 2007 the importance of Pakistan as destination or transit country for opiates produced in Afghanistan appears to have increased. According to UNODC estimates, the overall proportion of opiates from Afghanistan exiting the country via Iran fell to 50%, while the proportion exiting via Pakistan increased slightly to 35% in 2007. The proportion exiting Afghanistan via Central Asia declined marginally to 14.5% of the total. The rest (about 0.2% of the total) went to China. In 2007, if only heroin & morphine are considered, UNODC estimates that 51% exited Afghanistan via Pakistan (up from 48% in 2006), followed by Iran (29.5%, down from 31%) and Central Asia (19.5%[5] down from 21% in 2006[6] and 25% in 2005).[7]

Seizures made by countries along the Silk Route (countries of Central Asia and European C.I.S. countries) declined in 2006. When seizures made by countries along the Silk Route and along the extended Balkan route (Pakistan, Iran, Turkey, Balkan countries) are taken

3 Pakistan, Anti Narcotics Force, presentation to Heads of National Law Enforcement Agencies, Sept. 2007.

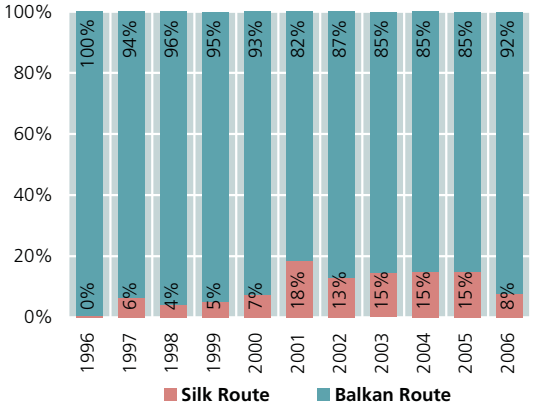
4 UNODC, *Afghanistan Opium Survey 2006*, October 2006.

5 The methodology used to arrive at these estimates is provided in UNODC, *Afghanistan Opium Survey 2007*, October 2007, pp. 139-152.

6 UNODC, *Afghanistan Opium Survey 2006*, October 2006.

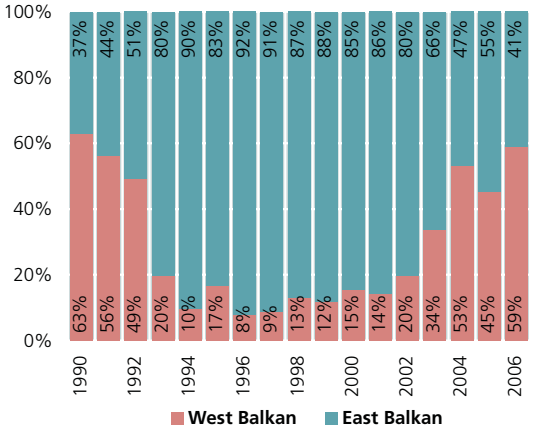
7 UNODC, *Afghanistan Opium Survey 2005*, October 2005.

Fig. 25: Proportion of seizures of heroin & morphine made along the Balkan Route and along the Silk Route, 1996-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Fig. 26: Trafficking of heroin and morphine along the European Balkan route*, 1990-2006



For the purposes of this analysis only seizures of the following countries were combined to reflect trafficking along the European Balkan route. West-Balkan route: Albania as well as former Yugoslavia and its successor states, i.e. Bosnia Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Slovenia. East Balkan route: Bulgaria, Romania and Hungary.
Source: UNODC, Annual Reports Questionnaire / DELTA.

as a whole, about 8% of seizures were made along the silk route less than in 2006, less than in recent years when 15% of seizures were made along the Silk Route (or 'Northern Route'). This is consistent with the expansion of opium production in the southern provinces of Afghanistan, and falling levels in northern Afghanistan. The route via Central Asia mainly serves the Russian and C.I.S. countries markets and, to a lesser extent, China. Some of the heroin destined for the Baltic countries and the Nordic countries is also shipped along this route.

Most of the opiates from Afghanistan destined for Western Europe continue to be trafficked via Pakistan, Iran, Turkey and the Balkan countries. In addition, a number of direct routes also exist - by air, via Pakistan to Europe (notably the UK), and via the Middle East, East Africa and then West Africa to Europe. There are also suspicions of increasing trafficking via the port of Karachi.

The Northern Black Sea route, which begins in Iran and transits the Caspian sea, Azerbaijan, Georgia and the Ukraine to Romania, is being used with increased frequency. It is thought that improvements in border control between Turkey and Bulgaria have triggered this shift. Based on Turkish intelligence, a number of significant heroin seizures were made in Azerbaijan, Ukraine and Romania in 2007.[8]

The world's largest opiate seizures are made along the extended Balkan route. If all opiates (heroin, morphine and opium expressed in opium equivalents) are considered, Iran seized 37% of the world total in 2006, followed by Pakistan (26%), Turkey (8%) and West & Central Europe (6%). Six per cent of the total was in Afghanistan itself. In terms of heroin and morphine seizures, the world's largest seizures were reported by Pakistan (35 mt or 34% of total), followed by Iran (21 mt or 20% of total) and Turkey (11 mt or 10% of total).

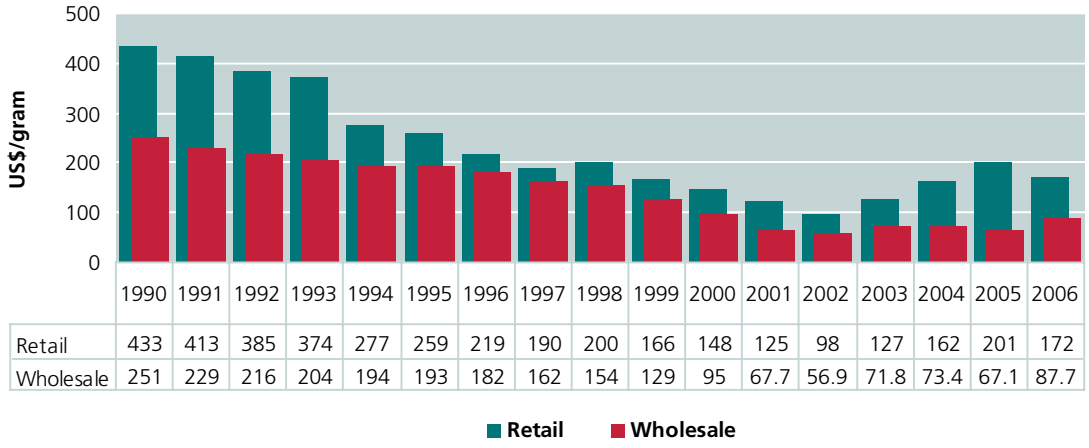
Some trafficking shifts to the Western Balkan route

Overall opiate seizures increased by 46% in Pakistan, 47% in Iran, 24% in Turkey and by 18% along the European Balkan route (excluding Turkey) in 2006.

In the early 1990s, prior to the disintegration of the former Yugoslavia, the West Balkan route accounted for 60% of all opiate seizures made along the European Balkan route. This route is thought to have regained some importance in recent years. Close to 60% of all heroin and morphine seizures in 2006 were made in countries located along the West Balkan route, up from 8% in 1996.

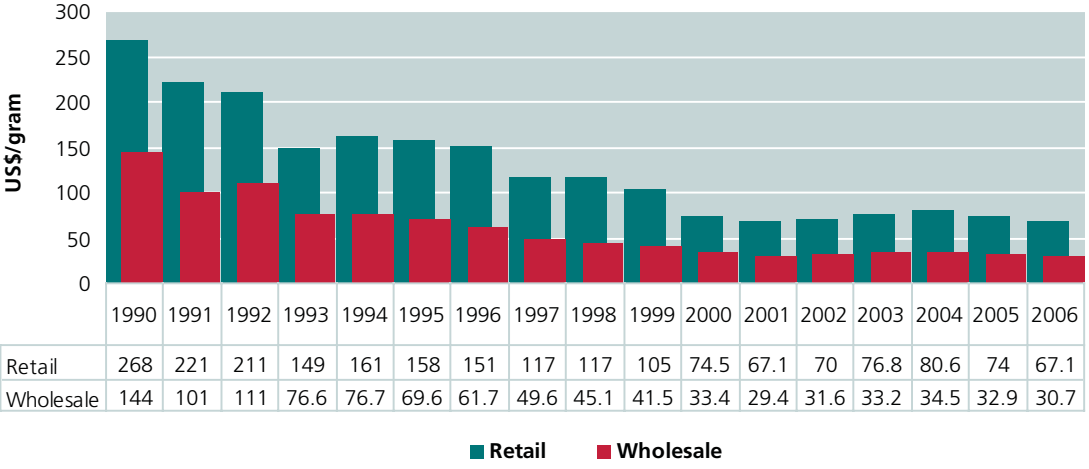
8 Ministry of Interior, Turkish National Police, *Turkish Report on Drugs and Organized Crime 2007*, February 2008.

Fig. 27: USA: Heroin retail and whole sale prices,1990-2007 (US$/gram)



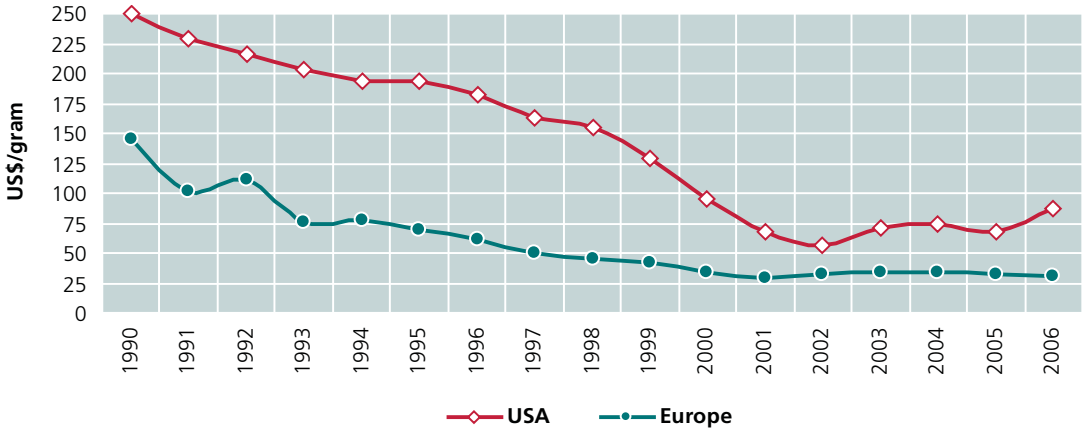
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Retail	433	413	385	374	277	259	219	190	200	166	148	125	98	127	162	201	172
Wholesale	251	229	216	204	194	193	182	162	154	129	95	67.7	56.9	71.8	73.4	67.1	87.7

Fig. 28: EUROPE: Heroin retail and whole sale prices, 1990-2007 (US$/gram)

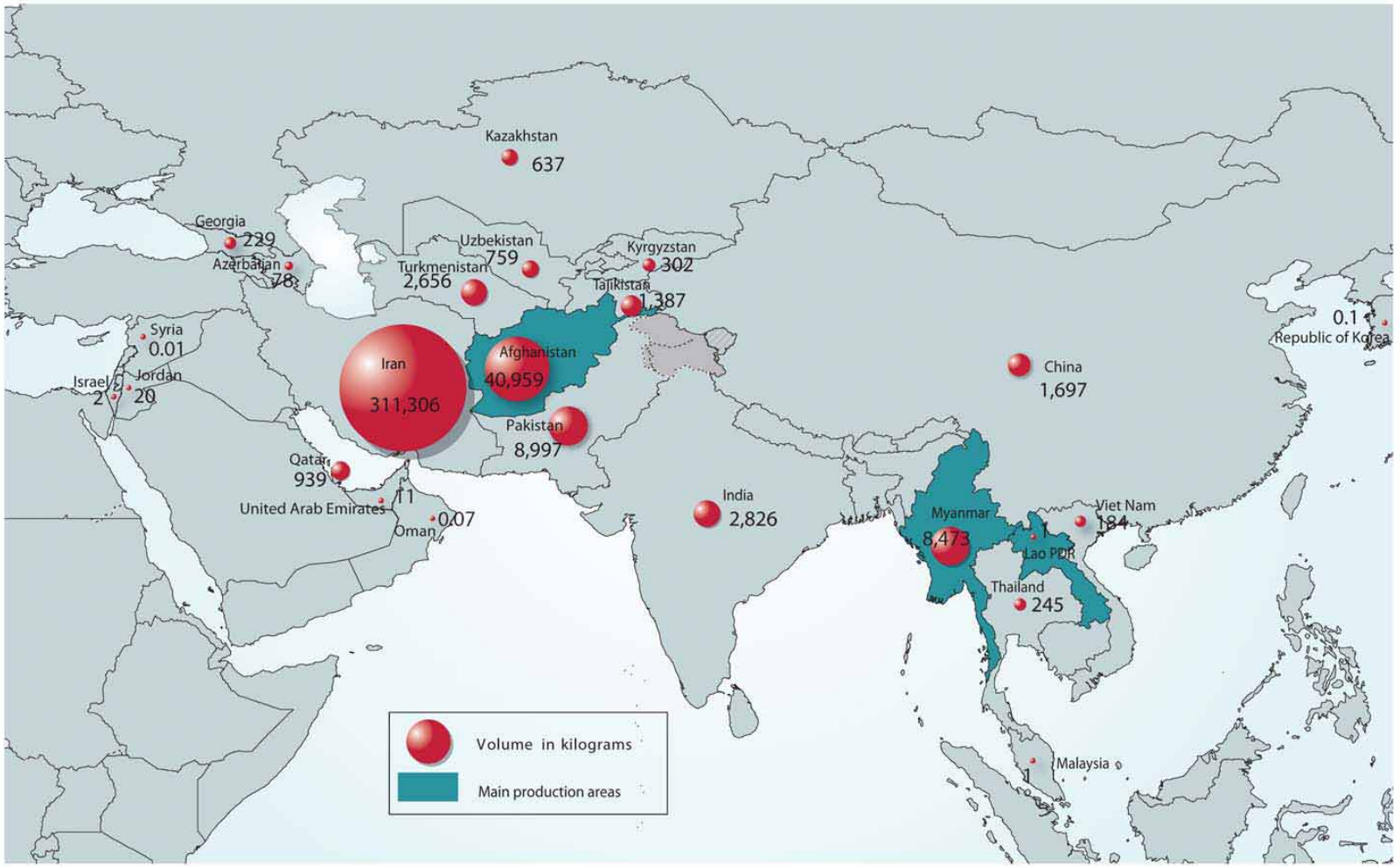


	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Retail	268	221	211	149	161	158	151	117	117	105	74.5	67.1	70	76.8	80.6	74	67.1
Wholesale	144	101	111	76.6	76.7	69.6	61.7	49.6	45.1	41.5	33.4	29.4	31.6	33.2	34.5	32.9	30.7

Fig. 29: Wholesale heroin prices in Europe and the USA, 1990-2007 (US$/gram)

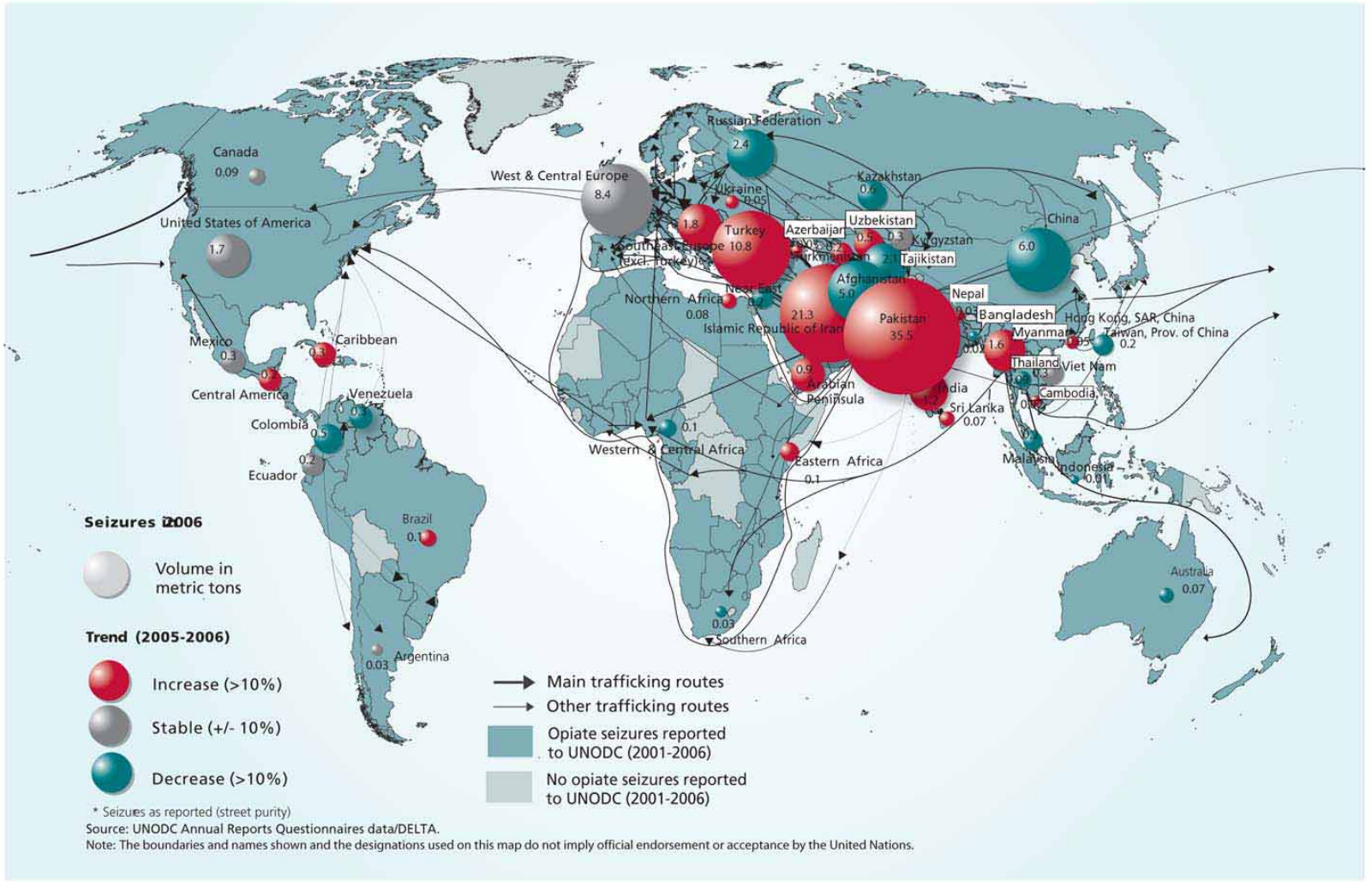


Map 4: **Opium seizures in Asia, 2006**



Source: UNODC Annual Reports Questionnaires data/DELTA.
Note:The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 5: **Trafficking in heroin and morphine, 2006 (countries reporting seizures* of more than 10 kg)**

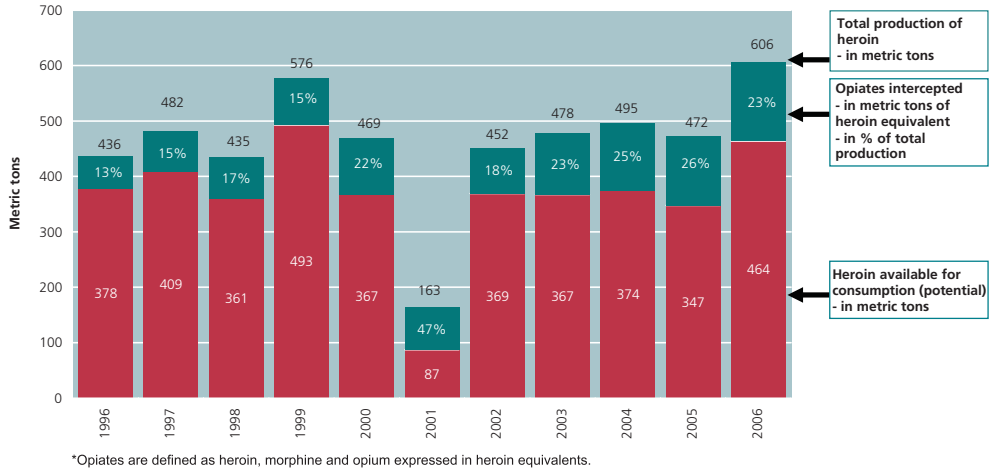


* Seizures as reported (street purity)

Source: UNODC Annual Reports Questionnaires data/DELTA.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Fig. 30: Global illicit supply of opiates, 1994-2006



*Opiates are defined as heroin, morphine and opium expressed in heroin equivalents.

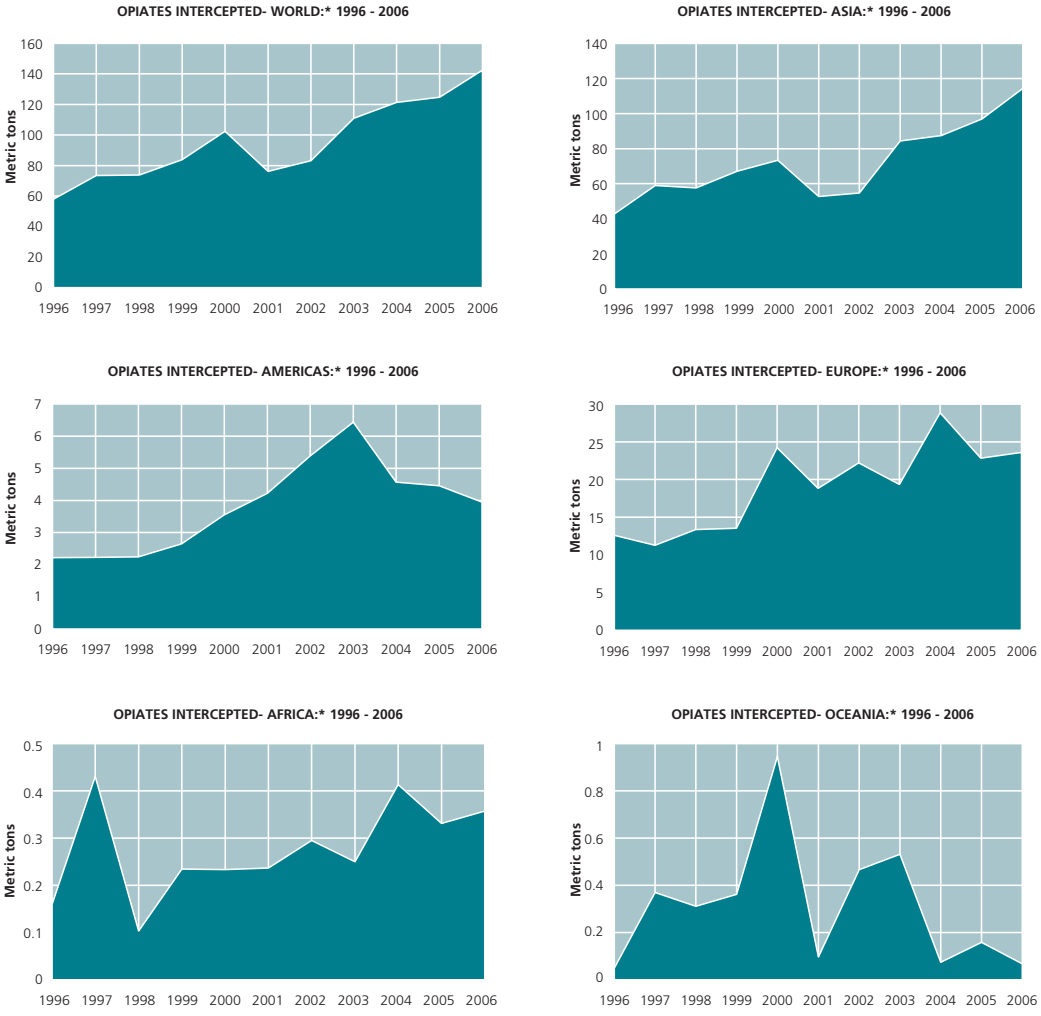
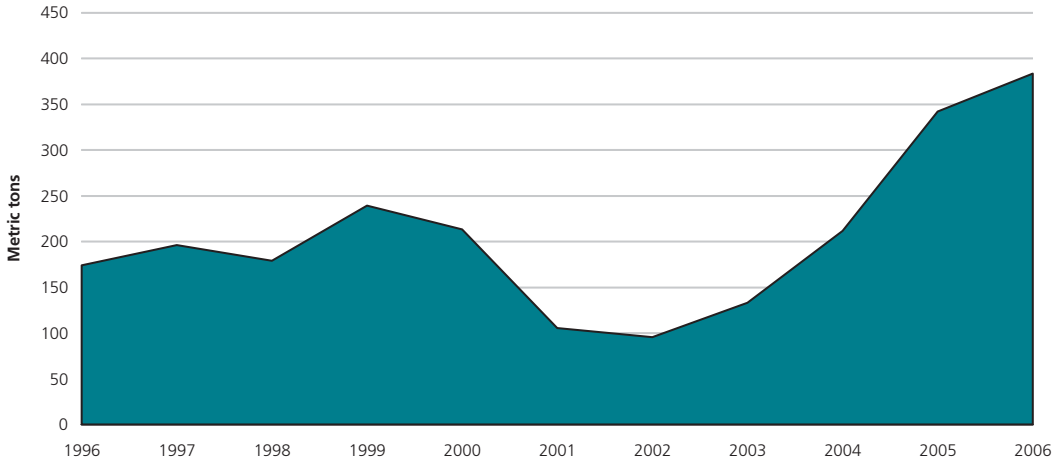


Fig. 31: Global seizures of opium, 1990-2006



Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Metric Tons	174	196	179	239	213	106	96	133	212	342	384

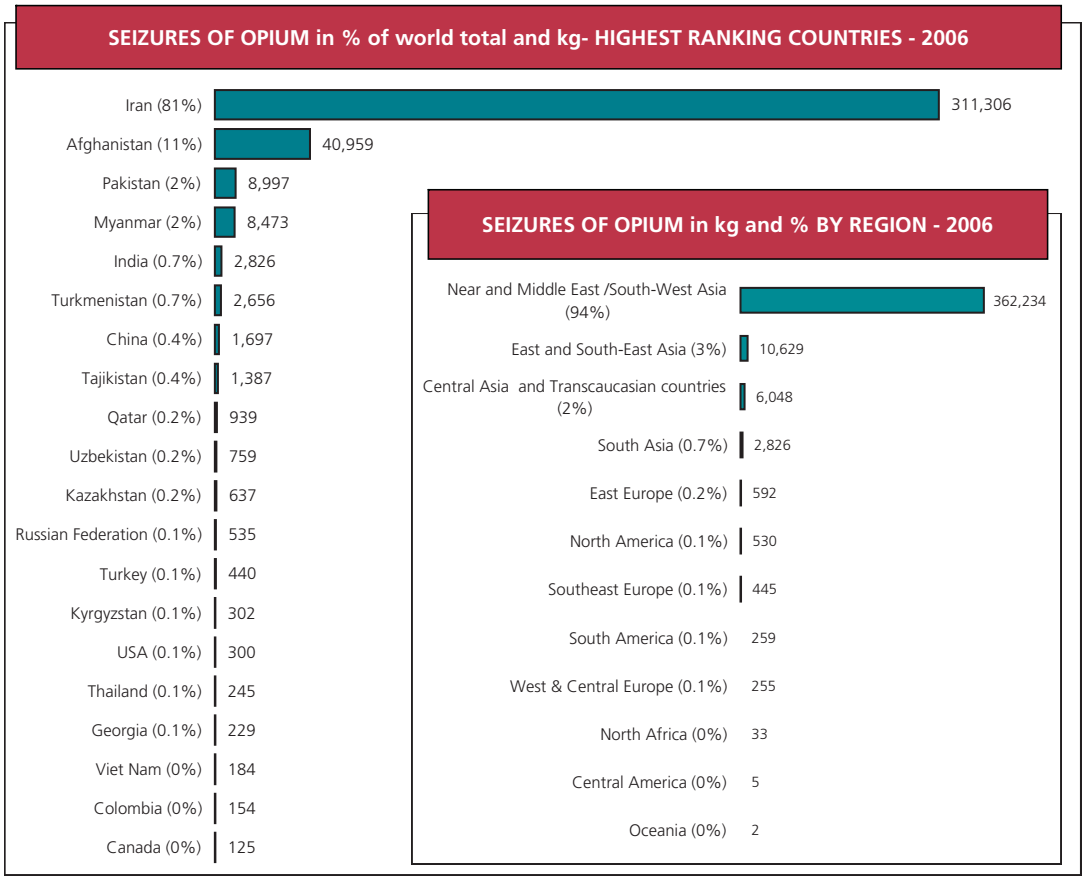
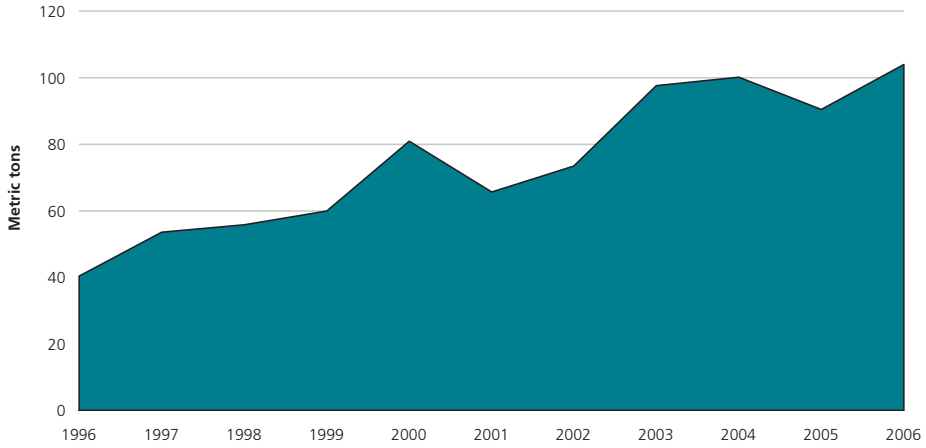
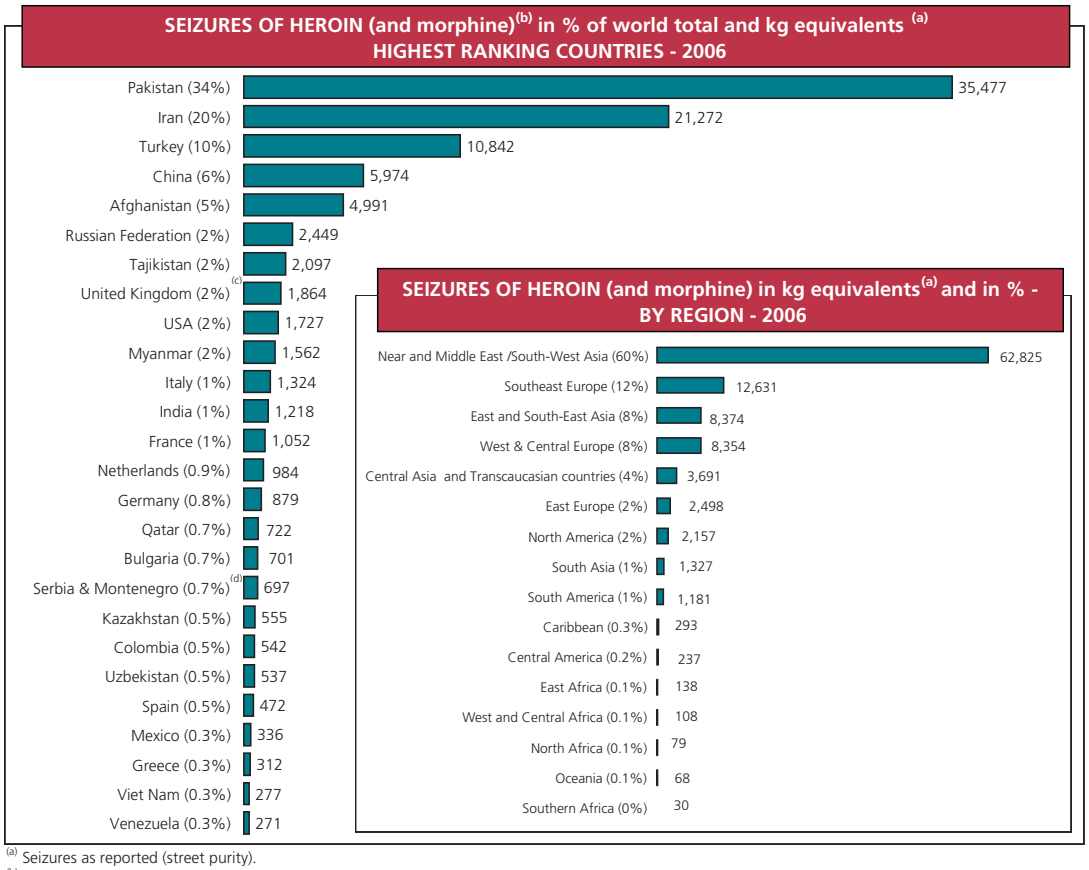


Fig. 32: Global seizures of heroin[a] and morphine[b], 1995-2006



[a] Seizures as reported (street purity).
[b] 1 kg of morphine is assumed to be equilveant to 1 kg of heroin.

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Metric Tons	40	54	56	60	81	66	73	98	100	90	104



[a] Seizures as reported (street purity).
[b] 1 kg of morphine is assumed to be equivalent to 1 kg of heroin.
[c] Data refer to 2005 England and Wales only.
[d] Montenegro established independence as of June 2006.

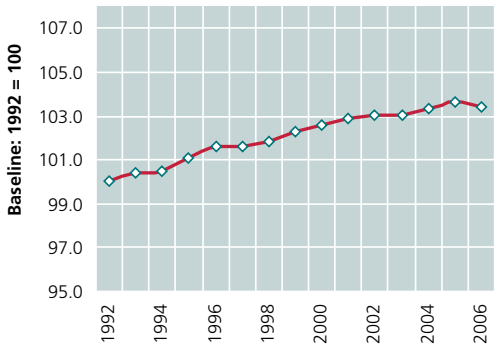
1.2.4 Consumption

Global consumption of opiates remain essentially stable

Although there has been significant growth in the production of opiates in recent years, global consumption remains relatively stable, with only a marginal increase in annual prevalence: from 0.37 % of the population age 15-65 in 2005 to 0.39% in 2006. Opiate consumption trends (expert perceptions reported by States Members), weighted by the opiate using population in each country, suggest that opiate consumption could have declined marginally in 2006.

The total number of opiate users at the global level is now estimated at around 16.5 million people. Though the number of opiate users has increased in absolute terms, the annual prevalence rate of 0.4% of the population age 15-64 has remained stable since the late 1990s.

Fig. 33: Opiate use trends as perceived by experts, 1992-2006



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports and local studies.

The largest number of opiate users are in Asia

More than half of the world's opiate using population live in Asia (9.3 million). The highest levels of use are found along the main drug trafficking routes out of Afghanistan. About 2.3 million opiate users are estimated to live in the Near & Middle East / South-West Asia sub-region which has highest prevalence rate of all sub-regions in Asia (1% of the population age 15-64).

Above average rates are reported by Afghanistan (1.4%) and Iran (2.8% of the population age 15-64). A Rapid Assessment Study (RAS) conducted by Iran and UNODC in 1999 reported that there were1.2 million regular opiate users. This figure was confirmed, when the Iranian authorities conducted a RAS among arrested addicts in 2007. The range of the latter study was: 0.8-1.7 million people.[1] The 2006 National Assessment Report on Problem Drug Use in Pakistan reported that there were approximately 630,000 opiate users in Pakistan, equivalent to 0.7% of the population age 15-64. Of these, around 480,000 (77%) were heroin users.[2] Thus, while Pakistan's rate of opiate use (0.7%) is below the sub-regional average, it is almost twice the global average. The prevalence rate in the Pakistan province of Baluchistan, located along the main trafficking route from southern Afghanistan via Pakistan to Iran, amounts to 1.1% and is above the sub-regional average.

In the Central Asia and the Caucasus sub-region the average annual prevalence rate was 0.7% in 2006. Above average prevalence rates were reported from Kazakhstan (1%), Kyrgyzstan (0.8%) and Uzbekistan (0.8%). Estimates for Tajikistan are slightly lower (0.5%). There are an estimated 300,000 opiate use in Central Asia as a whole. The number of registered drug users in Central Asia was 90,082 in 2006, of these 70% were opiate users. Seventy-six percent of Central Asia's 63,296 registered opiate users consume heroin and 24% consume opium. Ninety-one percent of all registered opiate users inject their drugs.

The average annual prevalence of opiate consumption South Asia was 0.4% in 2006. India was the largest opiate market in the sub-region with a an estimated opiate using population of around 3 million persons.

1 The 2007 RSA found that among arrested drug addicts in Iran, 32.8% used opium, 25.7% 'Asian Crack' (which does not seem to be linked to cocaine), 18.8% used heroin, 5.8% an opium residue and 3.7% 'Crystal' (a heroin variety in Iran) and 1.1% used other opiate. Use of drugs other than opiate was limited: hashish: 1.9%, ecstasy: 0.4%, Bupronorphine, 0.3%, cocaine: 0.1%, LSD: 0.1% (See Drug Control Headquarters of the Islamic Republic of Iran, *Policies, Achievements, Ongoing Programs and Future Plans*, Tehran 2007.)

2 UNODC and the Paris Pact Initiative, *Illicit Drug Trends in Pakistan*, April 2008.

In East and South-East Asia the average annual prevalence rate for the sub-region remains below average (0.2%). New estimates put the annual prevalence rate for opium use in China at around 0.25%[3] (2.3 million persons). Rates above the East & South-East Asian average are reported from the Lao PDR (0.5%) and from Myanmar (0.4%). UNODC surveys identified declines in opiate use in recent years which have paralleled declines in domestic opium production. In both countries, opium producing villages have significantly higher opium consumption rates than non-opium producing villages.

Despite declines in opiate use in China, Indonesia, Malaysia, Myanmar, Lao PDR, and the Philippines, Asia's overall share in global opiate use rose from 54% in 2005 to 57% in 2006. Asia's share in global heroin use is smaller: 6.1 million persons or 51% of the world total, reflecting the fact that, in contrast to other regions, opium consumption is still widespread.

Europe remains the second largest consumer market for opiates

Europe has some 3.6 million opiate users, equivalent to an annual prevalence rate of 0.7% of the population age 15-64. This region is the world's second largest opiate market in terms of quantities consumed (22% of the total in 2006, down from 25% in 2005), and the largest in economic terms.

There were an estimated 1.5 million opiate consumers in West and Central Europe in 2006. Overall annual prevalence for the sub region, 0.5% of the population age 15-64, is stable to declining. The major opiate markets in Western Europe are the United Kingdom (340,000 persons), Italy (300,000), France (170,000), Germany (140,000) and Spain (70,000).[4] Opiate consumption stabilized over 2006 in most West and Central European countries. Italy, Germany, Norway, Portugal, and Spain reported falling levels of opiate use in 2006.

The number of opiate users in East Europe is estimated at around 2 million persons or 1.4% of the population age 15-64. The Russian Federation is the largest opiate market in the region; estimates on the number of consumers in this market vary substantially.[5] Prior to this year, UNODC used the estimates provided by the Russian authorities for the year 2000/01 which suggested that there were roughly two million opiate users,[6] or 2% of the population age 15-64. New data and research made available by the Russian Federation in 2007 has enabled UNODC to revise the estimate for 2006 to 1.65 million opiate consumers in the Russian Federation or 1.6% of the population age 15-64.[7] The second largest opiate market in East Europe is the Ukraine, which has approximately 300,000 opiate users or 0.9% of the population age 15-64.

Overall use thought to be stable in North America

When taken together, opiate use in North, Central and South America and the Caribbean, is estimated to affect 2.2 million persons or 0.4% of the population age 15-64. This is equivalent to 13% of all opiate users in 2006.

The largest opiate market in this region is the USA with approximately 1.2 million heroin users or 0.6% of the population age 15-64. This estimate is based on estimates of chronic and casual heroin users for the year 2000. Available trend data suggest that heroin use has remained relatively stable in the USA since 2000. Household survey data indicate a stable rate of 0.2%, of the population age 12 and above, over the 2001-2006 period.

According to national household survey results (2005), the largest opiate market in South America is Brazil which has some 600,000 opiate users or 0.5% of the general population age 12-65. Most of these individuals use synthetic opiates. The annual prevalence for heroin rate is less than 0.05%.

3 Estimate derived from Lu F, Wang N, Wu Z, Sun X, Rehnstrom J, Poundstone K, et al. "Estimating the number of people at risk for and living with HIV in China in 2005: methods and results; Sex Transmitted Infections, June 2006, Vol. 82 Suppl 3, pp. iii 87-91, reported in Bradley Mathers, Louisa Degenhardt, Benjamin Phillips, Lucas Wiessing, Matthew Hickman, Alex Wodak, Steffanie Strathdee, Mark Tyndall, Abdalla Toufik, Richard P. Mattick, and the Reference Group to the United Nations on HIV and injecting drug use, "The global epidemiology of injecting drug use and HIV among people who inject drugs: a systematic review", April 2008.

4 All of these estimates have been derived from estimates of the number of problem drug users because household survey are not considered to provide good estimates on the number of heroin and other opiate users.

5 This also reflects major differences on the estimates of total drug use in the Russian Federation. A review of estimates of the total number of drug users in the Russian Federation showed a range from 1.5 million to 6 million people (UNODC, *Illicit Drug Trends in the Russian Federation,* 2005). According to experts of the Ministry of Internal Affairs there are some 4 million people using illicit drugs; the experts are of the opinion that most of these drug users are using opiate. (UNODC and the Paris Pact Initiative, *Illicit Drug Trends in the Russian Federation,* April 2008.)

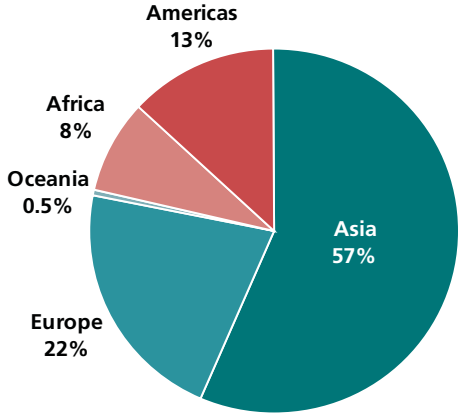
6 This estimate was derived from an estimate of the total number of drug users in the Russian Federation in 2000/01 (UNODCCP, *Country Profile on Drugs and Crime in the Russian Federation,* 2002) and estimates of the proportion of opiate users among all registered drug users.

7 The new estimate is based on registered drug users and a new treatment multiplier. 350,267 drug dependent patients were registered in 2006. Of these 89% were reported to have been registered for opiate use. (see UNODC and the Paris Pact Initiative, *Illicit Drug Trends in the Russian Federation*, April 2008). The new national-level treatment multiplier of 5.3 (range: 4.4 in Siberia to 7.9 in the Volga Federal District), was reported by United Nations Office on Drugs and Crime, National Addiction Centre of the Russian Federation, *Dynamics of Drug-Related Disorders in the Russian Federation* (2007) and quoted in United Nations Economic and Social Council, World Situation with regard to drug use, Report by the Secretariat, January 2008, E/CN.7/2008/4.

UNODC estimates for Africa suggest that, continent-wide, there are around 1.4 million people (0.3% of the population age 15-64) using opiates. Most of them use heroin. The prevalence rate of opiate use is highest in Mauritius (2%), followed – according to a recent study - by Egypt (0.7%).[8] Egypt is the largest opiate market (some 330,000 people) in Africa.

Approximately 70% of opiate users consume heroin

Fig. 34: Regional breakdown of opiate users in 2006



Sources: UNODC, Annual Reports Questionnaire Data, Govt. reports, reports of regional bodies, UNODC estimates.

Globally, an estimated 72% of the world's 16.5 million opiate users use heroin (some 12 million people).

UNODC estimates for Europe suggest that close to 90% of opiate users use heroin. In Western Europe, heroin is often consumed with other opioids[9] including substitution drugs such as methadone, buprenorphine or slow releasing morphines. In Central and East European countries such as Poland, Lithuania, the Ukraine or Russia heroin can be used in addition to liquid poppy straw extracts (also known as 'kompot').

In Asia about two thirds of all opiate users consume heroin with opium more common in rural areas and heroin more common in urban areas. Opium use is particularly widespread in Iran, Afghanistan, Myanmar and Laos. In Africa almost all opiate consumption is in the form of heroin. The exception to this is Egypt where significant consumption of (locally harvested) opium takes place in addition to heroin.

In South America most reported opiate consumption is linked to the use of synthetic opioids diverted from licit sources. Less than 30% is heroin. Similarly in the Oceania region, only a third of opioids users consume heroin. This reflects the availability of various synthetic opioids and some lingering heroin supply constraints related to the heroin shortage of 2001. The non-medical use of these synthetic opioids is increasing in the USA. Non-medical use of "pain relieving" synthetic opioids (such as codeine, OxyContin, Propoxyphene etc.) increased from 4.7% of the population age 12 and above in 2002, to 5.1% in 2006. In fact, if the non-medical use of synthetic opiods is counted alongside the use of heroin and morphine, the overall annual prevalence rate for the use of non-medical opioids would exceed 5% of the adult population. The total opioids prevalence rate would be around 5.5%, i.e. almost ten times the level of heroin use in the USA. Excluding synthetic opioids, heroin accounts for about 95% of opiate use in North America.

Opiate consumption continues rising among countries near Afghanistan but falls in East and South-East Asia

Most countries of East and South-East Asia reported declines in opiate use in 2006, reflecting the strong declines of opium production in Myanmar and the Lao PDR in recent years. Countries reporting declines included China, Indonesia, the Philippines, Malaysia and Myanmar. Overall, use trends as perceived by experts showed a small decline for the year 2006. Over the 1996-2006 period the same indicator highlights Asia as the driving force behind the increase in the total number of opiate users at the global level. If experts did not perceive increases in the opiate markets in South West Asia and Central Asia over that period, the trend would have remained stable, not only in relative terms (prevalence rates) but also in absolute numbers.

Stable to declining consumption levels in West and Central Europe

Use of opiates remained stable or declined in the countries of West and Central Europe in 2006: 20 West and Central European countries reported a stabilization of opiate use; 8 reported a decline and only 4 reported an increase. Europe's overall drug use perception indicator thus exhibited a downward slope in 2006. A number of indirect indicators (treatment demand, arrest figures, etc.), and household survey data, seem to confirm this

8 Out of 40,083 persons interviewed (age 15 and above) in 2005/06, 275 persons admitted to be using opiate (0.7%). This was less than the number of people using cannabis (3,591 or 9%) or 'pharmaceutical drugs' (449 or 1.1%), and more than the 202 persons (0.5%) admitting to be using stimulants (amphetamines, 'Maxiton Forte' and cocaine). (See Imad Hamdi Ghaz, *National Study of Addiction, Prevalence of the Use of Drugs and Alcohol in Egypt* (2005 – 2006), Cairo 2007).

9 *'Opioid'* is a generic term applied to opiate and their synthetic analogues, with actions similar to those of morphine, in particular the capacity to relieve pain. (UNODC, *Terminology and Information on Drugs*, Second Edition, New York 2003: available at www.unodc.org) While 'opiate' refer to opium and drugs derived from opium (such as morphine, heroin), plant based and synthetically manufactured opiate together are referred to as 'opioids'.

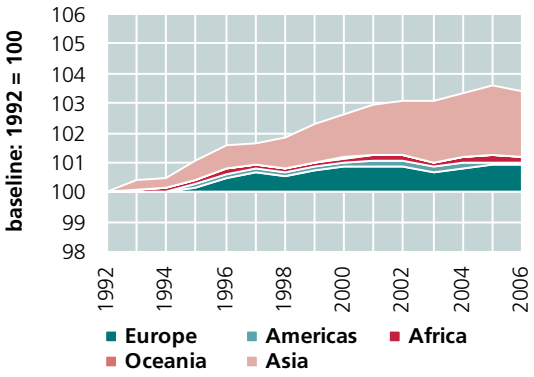
Table 4: Annual prevalence of opiate use, 2006

	use of opiate		of which use of heroin	
	population in million	in % of population 15-64 years	population in million	in % of population 15-64 years
EUROPE	3,590,000	0.7	3,130,000	0.6
West & Central Europe	1,450,000	0.5	1,370,000	0.4
South-East Europe	140,000	0.2	130,000	0.2
Eastern Europe	2,000,000	1.4	1,630,000	1.1
AMERICAS	2,180,000	0.4	1,520,000	0.3
North America	1,330,000	0.5	1,270,000	0.4
South America	850,000	0.3	250,000	0.1
ASIA	9,330,000	0.4	6,080,000	0.2
OCEANIA	80,000	0.4	30,000	0.1
AFRICA	1,360,000	0.3	1,210,000	0.2
GLOBAL	**16,540,000**	**0.4**	**11,970,000**	**0.3**

Above global average **Around global average** **Below global average**

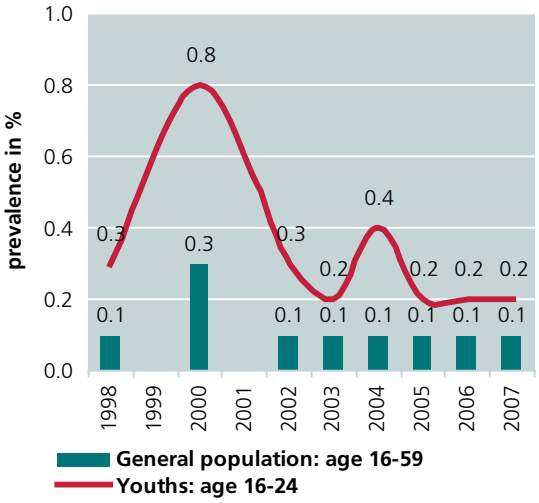
Sources: UNODC, Annual Reports Questionnaire Data, Govt. reports, reports of regional bodies, UNODC estimates.

Fig. 35: Opiate use trends as perceived by experts: regional contribution to global change: 1992-2006



Sources: UNODC, Annual Reports Questionnaire Data, Government reports, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), EMCDDA, CICAD, HONLEA reports and local studies.

Fig. 36: England and Wales: heroin use according to British Crime Survey, 1998-2007



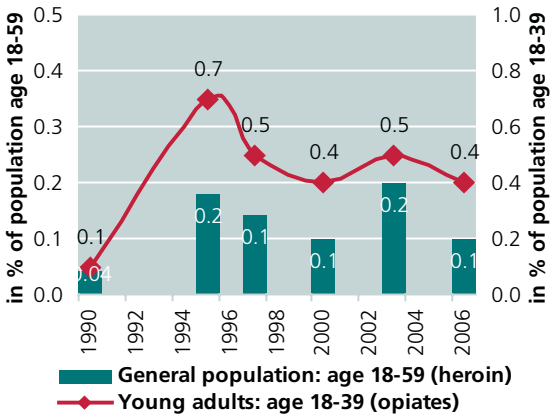
Source: UK Home Office, British Crime Survey, 2006/07.

assessment.

British Crime survey data for England and Wales indicate an increase in heroin use in the late 1990s, followed by a decline in the new millennium and a stabilization of heroin use in recent years. A number of other indicators (arrests, treatment, heroin purity, drug related death etc.) confirm these trends. The UK, in absolute numbers, is still considered the largest heroin market of West and Central Europe with a prevalence rate of total opiate use – derived from problem drug use estimates - of around 0.9% of the population age 15-64 (2005).

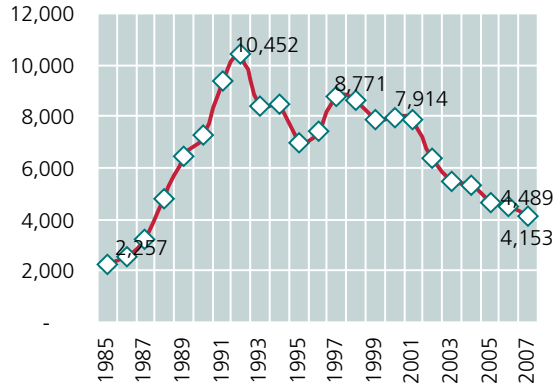
Similarly, household survey data for Germany show a basically stable or declining trend for heroin/opiate consumption in recent years. Between 2003 and 2006 household survey data show a decline in heroin use. The number of newly registered heroin users declined by

Fig. 37: Germany: heroin use according to national household surveys, 1990-2006



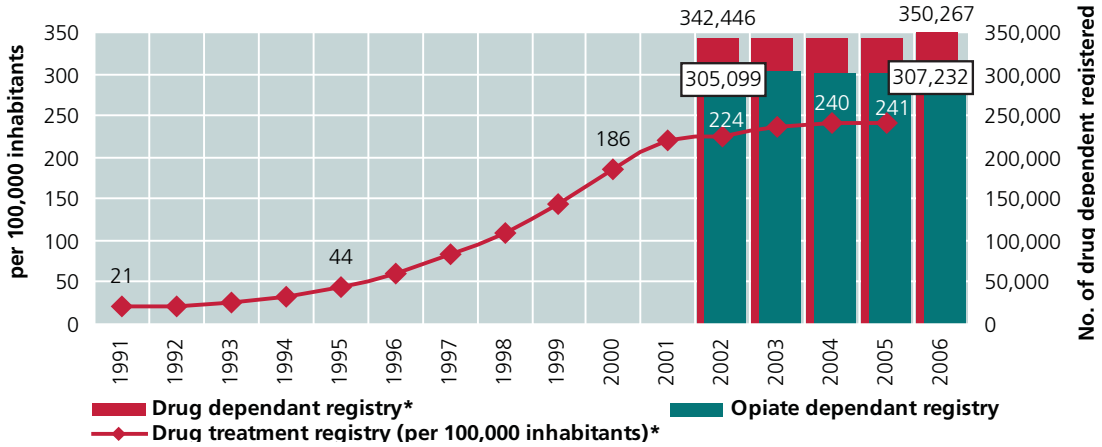
Sources: German Ministry of Health, EMCDDA, Institute for Therapy Research (IFT) and UNODC, Annual Reports Questionnaire Data.

Fig. 38: Germany: number of newly registered heroin users*



* Number of heroin users who have come to the notice of the police for the first time
Source: Bundeskriminalamt, *Rauschgift, Jahreskurzlage 2007* (and previous years).

Fig. 39: Russian Federation: registered drug users, 1991-2006



* Drug dependent registry: number of users registered with medical establishments as drug dependant.
* Drug treatment registry: number of patients with drug addiction registered at drug dependence treatment facilities
Sources: UNODC, Annual Reports Questionnaire Data, Russian Federal Ministry of Health and Social Development, quoted in UNODC and The Paris Pact Initiative, *Illicit Drug Trends in the Russian Federation*, April 2008, UNODC, 2004 World Drug Report and UNODC, Russian Federation, Country Profile.

18% over the 2003-2006 period and by a further 7% in 2007. The decline since 2000 amounted to 48% and the number of newly registered users is now at the lowest level since 1987.

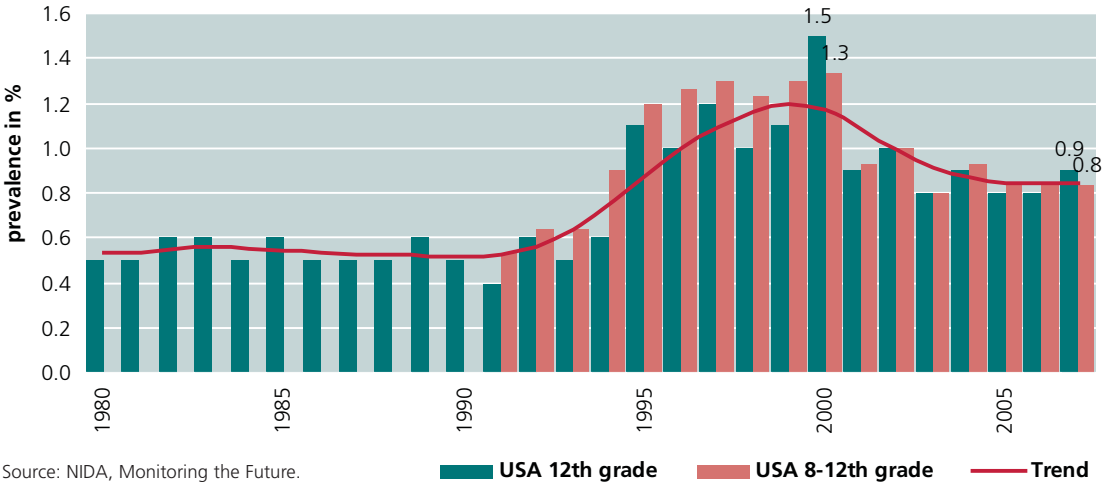
A stabilisation/decline also occured in the Russian Federation, following many years of dramatic increases. The number of registered drug dependent persons (350,267 in 2006), including the number of registered opiate users (307,232 in 2006), has remained largely unchanged over the 2002-2006 period. Russian authorities reported a shortage of heroin on the Russian market in 2007 – despite the strong increase of Afghan opium production.

In some of the other East European markets (Ukraine and Belarus) opiate consumption continues to increse.

Opiate consumption in the Americas fairly stable

UNODC's drug use perception indicator showed a stable trend of opiate use in the Americas for the year 2006. This trend is reflected in school survey results from the United States and Canada which showed that after increases in the 1990s, heroin use fell and is currently basically stable. The annual prevalence of heroin consumption among 8th-12th grade students in the USA fell from 1.3% in 2000 to 0.8% in 2005 and

Fig. 40: USA: annual prevalence of heroin use among high-school students, 1980-2007



Source: NIDA, Monitoring the Future.

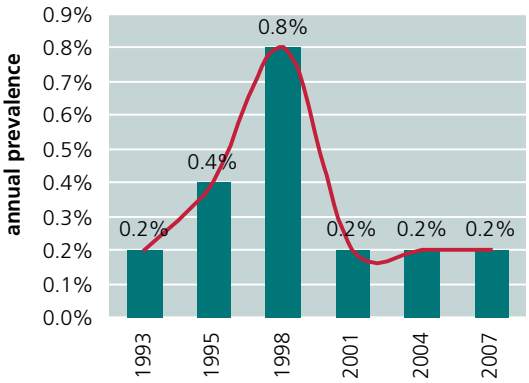
remained at that level in both 2006 and 2007. In the province of Ontario, Canada, which accounts for more than a third of Canada's total population, the decline among high-school students was even more pronounced. Annual prevalence of heroin use among 7th to 12th grade students fell from a peak of 1.9% in 1999 to 0.9% in 2005 and remained at that level in 2007. Falling opium production over the first few years of the new millennium in South America and South-East Asia, the two main sources of opiates for the North American market, seem to have contributed to this. Stable opiate use was reported from a number of other countries in the Americas for the year 2006. In contrast, rising levels of opiate use were found in Mexico, Venezuela and Argentina in 2006.

Opiate use in the Oceania region stable

The Oceania region, notably Australia, used to have one of the highest heroin prevalence rates among the industrialized countries (0.8% of the population age 14 and above in 1998). This changed in the early years of the new millennium. Following a major heroin shortage in 2001, engineered by the authorities through the dismantling of some major trafficking networks, purity levels fell while heroin prices rose strongly, squeezing large sections of heroin users out of the market. The number of drug related deaths declined substantially during this period. Fears that higher heroin prices would result in more crime, did not materialize. The 2007 National Drug Strategy Household Survey showed that the annual prevalence of heroin use – after having fallen drastically in 2001 - remained at 0.2% of the population age 14 and above.

The ongoing Drug Use Monitoring in Australia project (DUMA), where people arrested at selected police stations across the country are tested for drug use, also

Fig. 41: Heroin use among the general population (age 14 and above), 1993-2007



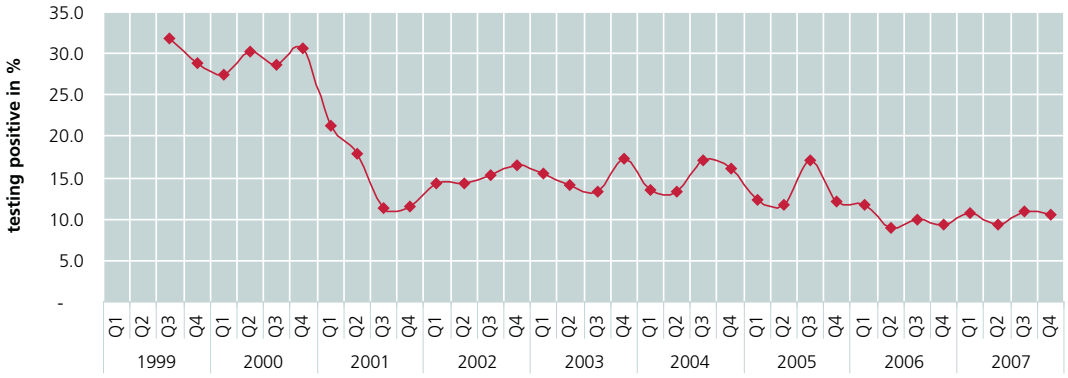
Source: AIHW, *2007 National Drug Strategy – Household Survey*.

suggest that heroin use levels continued to remain at the lower levels in 2007. While in 1999 and 2000 around 30% of people arrested by the police had used heroin, this proportion declined to 15% over the 2001-2004 period, and to 10% in 2006 and 2007. The DUMA data also show that the regional differences are now far less than they used to be when the heroin market was mainly concentrated in New South Wales.

Heroin use continues rising in Africa

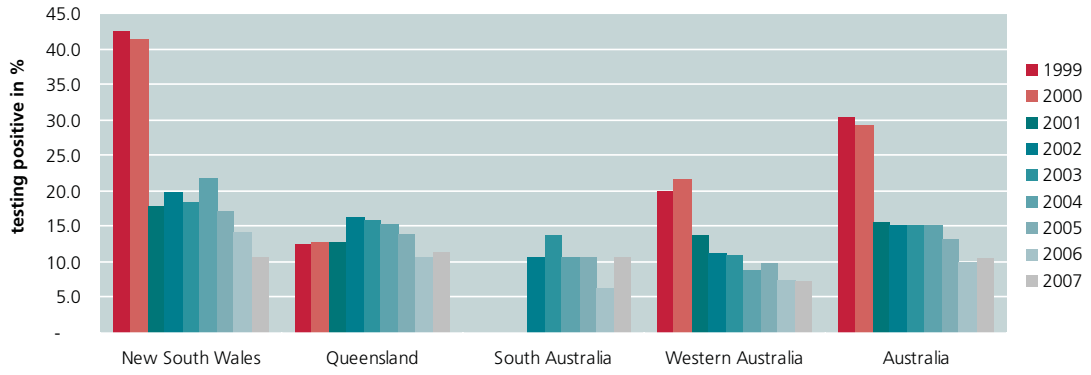
Heroin use trends received from African countries suggest that heroin consumption continued rising, in countries of eastern and southern Africa and some countries of western Africa. While expert perceptions in only three African countries indicated declines in use, in eight countries expert perceptions pointed to increasing use; in seven use was perceived as stable in 2006.

Fig. 42: Testing of arrestees for heroin use in Australia*, 1999-2007



* unweighted average of results from East Perth (Western Australia), Adelaide and Elisabeth (South Australia), Parramatta and Bankstown (Sydney, New South Wales), Brisbane and Southport (Queensland).
Source: Australia Institute of Criminology, *Drug Use Monitoring in Australia* (DUMA).

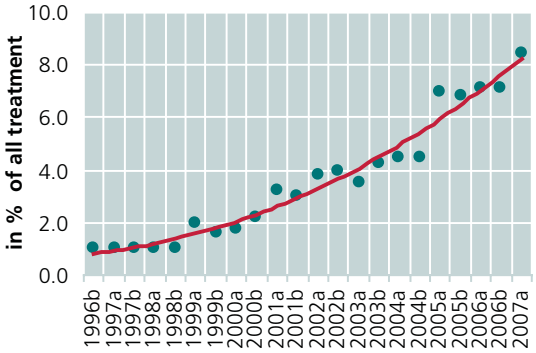
Fig. 43: Testing of arrestees for heroin use in Australia*, breakdown by regions, 1999-2007



* results from East Perth (Western Australia), Adelaide and Elisabeth (South Australia), Parramatta and Bankstown (Sydney, New South Wales), Brisbane and Southport (Queensland).
Source: Australia Institute of Criminology, *Drug Use Monitoring in Australia (DUMA).*

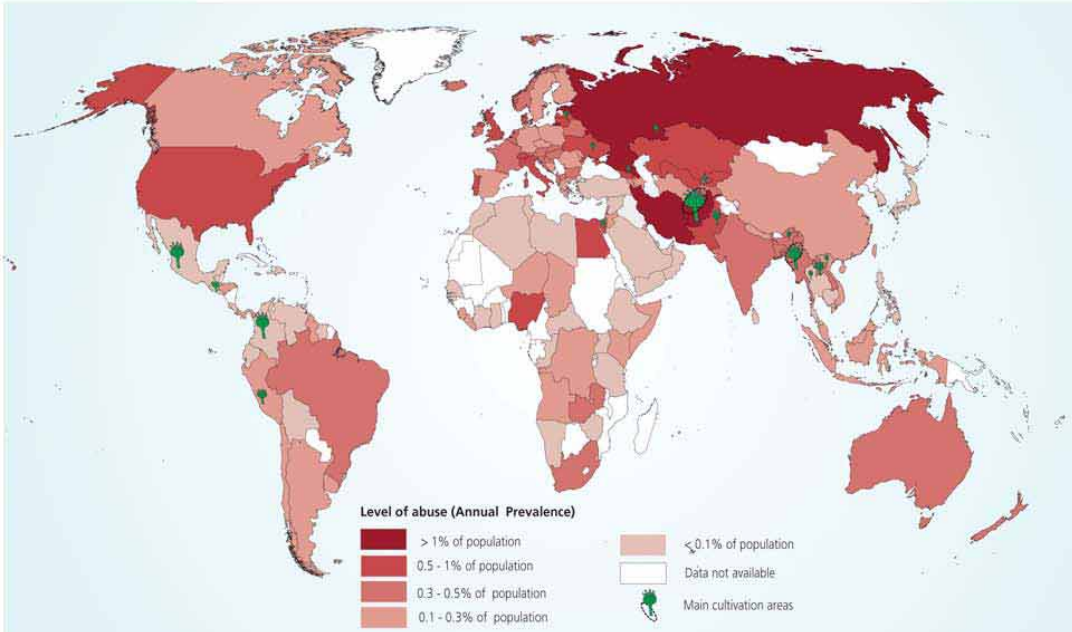
Increases in use over the last decade is best documented by the South African Community Epidemiology Network on Drug Use (SACENDU). Heroin accounted for less than 1% of treatment demand (including alcohol) in South Africa in 1996. By 2006 this proportion increased to 7%, and by the first two quarters of 2007 to 8.5% Over the last few years, there have been strong increases in treatment admissions for heroin in the Western Cape region (Cape Town), in Gauteng (Pretoria and Johannesburg), in KwaZulu-Natal (Durban, Pietermaritzburg), the most northern province along the Indian Ocean, and, in the land-locked northern province of Mpulanga, bordering Mozambique. Data for the first and second quarter of 2007 show increases in areas to the North of the country close to the Indian Ocean and Mozambique.

Fig. 44: South Africa – heroin as primary drug in treatment demand*, 1996-2007



* unweighted average of treatment (incl. alcohol) in 6 provinces.
Source: SACENDU, "Monitoring Alcohol & Drug Use Trends in South Africa, July 1996 – June 2007", *Research Brief*, Vol. 10 (2), 2007. Note: a: Jannuary to June; b: July to December.

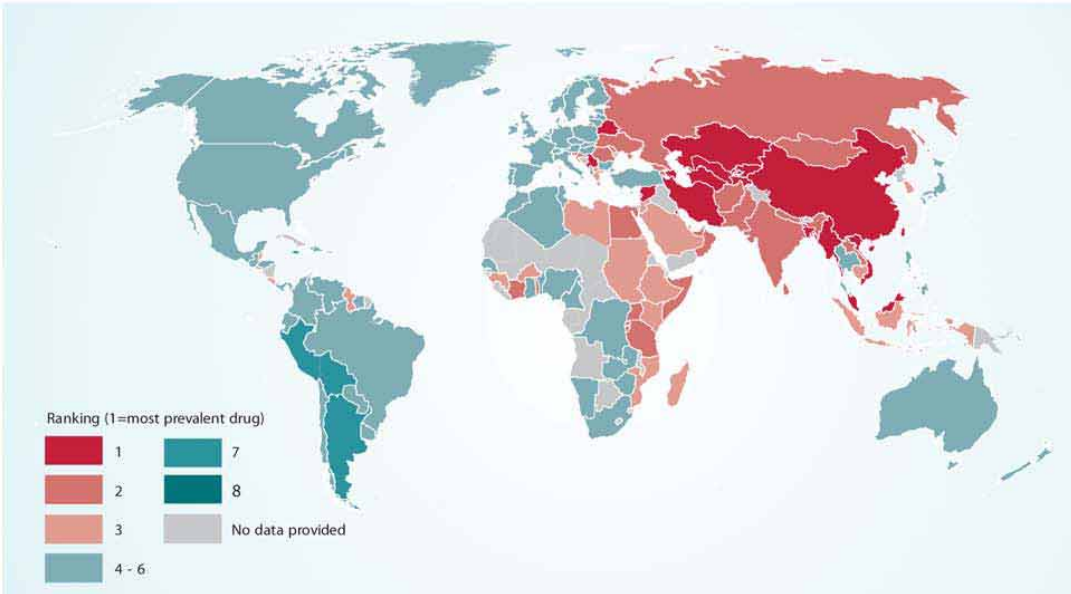
Map 6: Abuse of opiates (including heroin), 2006-2007 (or latest year available)



Sources: UNODC Annual Reports Questionnaires data; Government Reports, US Department of State; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); Drug Abuse Information Network for Asia and the Pacific (DAINAP); UNODC Global Assessment Programme on Drug Abuse (GAP), Inter-American Drug Abuse Control Commission (CICAD).

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

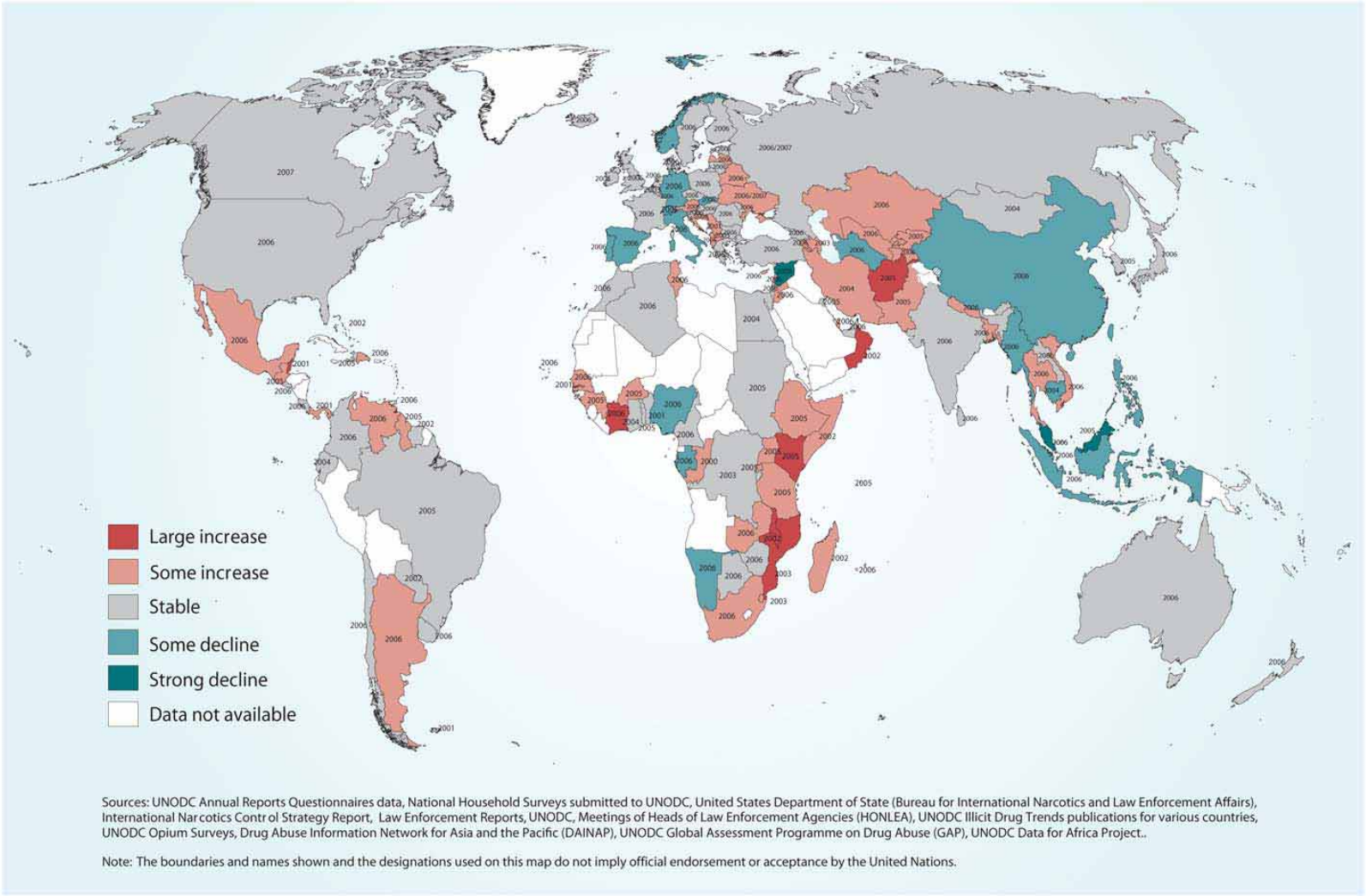
Map 7: Ranking of opiates in order of prevalence in 2006 (or latest year available)



Source: UNODC Annual Reports Questionnaires data/DELTA; Government Reports, US Department of State; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA);Drug Abuse Information Network for Asia and the Pacific (DAINAP); UNODC Global Assessment Programme on Drug Abuse (GAP); Inter-American Drug Abuse Control Commission (CICAD); UNODC Rapid Assessment Studies, Council of Europe, ESPAD.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 8: **Changes in the use of heroin and other opiates, 2006 (or latest year available)**



Sources: UNODC Annual Reports Questionnaires data, National Household Surveys submitted to UNODC, United States Department of State (Bureau for International Narcotics and Law Enforcement Affairs), International Narcotics Control Strategy Report, Law Enforcement Reports, UNODC, Meetings of Heads of Law Enforcement Agencies (HONLEA), UNODC Illicit Drug Trends publications for various countries, UNODC Opium Surveys, Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP), UNODC Data for Africa Project..

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

1.3 Coca / Cocaine Market

1.3.1 Summary Trend Overview

Although the coca/cocaine market is stable overall, it has experienced considerable fluctuations over the 2006/07 period. On the supply side, coca cultivation expanded in Bolivia, Colombia and Peru. In Bolivia and Peru, expansion was moderate, but in Colombia coca cultivation grew by 27%.

In 2007, the total area under coca cultivation in Bolivia, Colombia and Peru increased 16% to 181,600 ha. Despite the increases, the global area under coca cultivation continues to be lower than in the 1990s and 18% below the level recorded in 2000 (221,300 ha). (In Colombia, the level of cultivation in 2007 is 40% lower than it was in 2000.) In 2007, coca cultivation in Peru increased by 4 % to 53,700 ha. For a second consecutive year, coca cultivation increased in Bolivia, and amounted to 28,900 ha in 2007, an increase of 5%.

The expansion in cultivation in Colombia occurred in the region which has the largest area under coca cultivation. The region is known to have low yielding coca bush, and this, combined with the fact that cultivation declined in high yielding areas, seems to have prevented production in Colombia from growing apace with cultivation. Overall production remained at roughly 2006 levels.

Around 85% of all cocaine seizures were made in North, Central and South America. While the proportion of seizures in the western hemisphere continue to reflect use and production patterns, some new trends are emerging which merit attention. First, seizures have declined considerably in North America, consistent with contractions in the consumer markets of the USA and Canada; however, seizures are also falling in South America where use is expanding. Bolivia is a notable exception to the latter trend. Second, seizures are continuing to increase in West and Central Europe, and they have begun to increase in West Africa. The latter is likely to be related to the development of new trafficking routes linking South America to West and Central Europe, as reported in last year's *World Drug Report*.

There are indications that there was a shortfall in cocaine supply in the USA in 2007.

On the demand side, global stabilisation is being led by a continuing decline in consumption in North America where the largest markets for cocaine are found. At the global level, the decline has almost offset increases in South America, Western Europe and Western and Southern Africa.

Similary, although increases in Europe have been fuelling the overall increase in cocaine consumption over the last decade, there are signs that a stabilisation may be on the horizon.

While the demand side contraction in the main cocaine market is encouraging, the growth in markets which are either close to source (South America) or on emerging trafficking routes (Africa) indicate that further containment is still a challenge.

1.3.2 Production

Table 5: Global illicit cultivation of coca bush and production of coca leaf and cocaine, 1990-2007

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
CULTIVATION OF COCA BUSH IN HECTARES [a]																		
Bolivia [b]	50,300	47,900	45,300	47,200	48,100	48,600	48,100	45,800	38,000	21,800	14,600	19,900	21,600	23,600	27,700	25,400	27,500	28,900
Colombia [c]	40,100	37,500	37,100	39,700	44,700	50,900	67,200	79,400	101,800	160,100	163,300	144,800	102,000	86,000	80,000	86,000	78,000	99,000
Peru [d]	121,300	120,800	129,100	108,800	108,600	115,300	94,400	68,800	51,000	38,700	43,400	46,200	46,700	44,200	50,300	48,200	51,400	53,700
Total	**211,700**	**206,200**	**211,500**	**195,700**	**201,400**	**214,800**	**209,700**	**194,000**	**190,800**	**220,600**	**221,300**	**210,900**	**170,300**	**153,800**	**158,000**	**159,600**	**156,900**	**181,600**
POTENTIAL PRODUCTION OF DRY COCA LEAF IN METRIC TONS [e]																		
Bolivia	77,000	78,000	80,300	84,400	89,800	85,000	75,100	70,100	52,900	22,800	13,400	20,200	19,800	27,800	38,000	28,200	33,200	36,400
Colombia	45,300	45,000	44,900	45,300	67,500	80,900	108,900	129,500	165,900	261,000	266,200	236,000	222,100	186,050	164,280	164,280	154,130	154,000
Peru	196,900	222,700	223,900	155,500	165,300	183,600	174,700	130,600	95,600	69,200	46,200	49,300	52,500	72,800	101,000	97,000	105,100	107,800
Total	**319,200**	**345,700**	**349,100**	**285,200**	**322,600**	**349,500**	**358,700**	**330,200**	**314,400**	**353,000**	**325,800**	**305,500**	**294,400**	**286,650**	**303,280**	**289,480**	**292,430**	**298,200**
POTENTIAL MANUFACTURE OF COCAINE IN METRIC TONS [f]																		
Bolivia	189	220	225	240	255	240	215	200	150	70	43	60	60	79	98	80	94	104
Colombia [g]	92	88	91	119	201	230	300	350	435	680	695	617	580	550	640	640	610	600
Peru [h]	492	525	550	410	435	460	435	325	240	175	141	150	160	230	270	260	280	290
Total	**774**	**833**	**866**	**769**	**891**	**930**	**950**	**875**	**825**	**925**	**879**	**827**	**800**	**859**	**1,008**	**980**	**984**	**994**

(a) Potentially harvestable, after eradication.

(b) Sources: 1990-2002: CICAD and US Department of State, International Narcotics Control Strategy Report; since 2003: National Illicit Crop Monitoring System supported by UNODC.

(c) Sources: 1990-1998: CICAD and US Department of State, International Narcotics Control Strategy Report; since 1999: National Illicit Crop Monitoring System supported by UNODC.

(d) Sources: 1990-1999: CICAD and US Department of State, International Narcotics Control Strategy Report; since 2000: National Illicit Crop Monitoring System supported by UNODC.

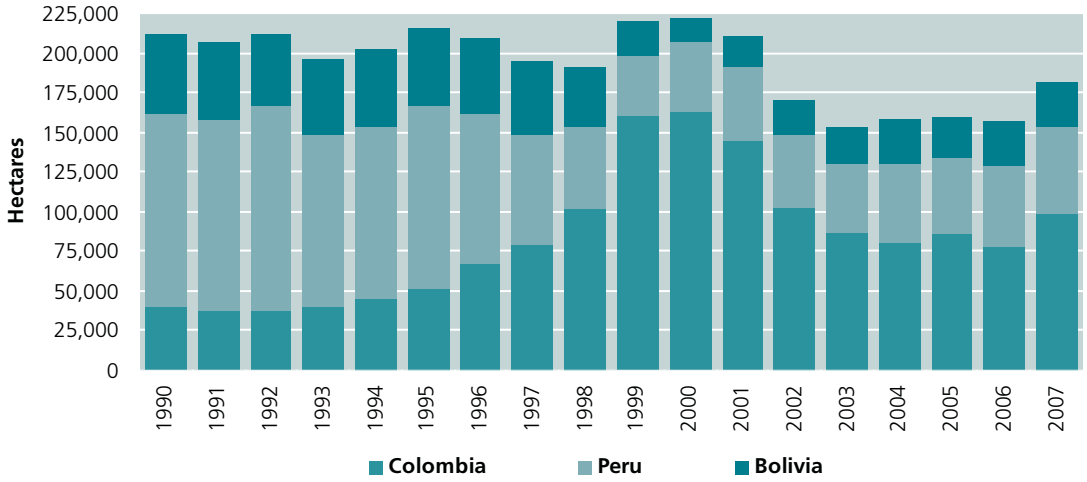
(e) Refers to the potential dry coca leaf production available for cocaine production, i. e. after deducting the amount, which governments report as being used for traditional or other purposes allowed under national law. In the absence of a standard definition of "dry coca leaf" and given considerable differences in the processing of the fresh coca leaf harvested, the figures may not always be comparable across countries.

(f) Amounts of cocaine that could be manufactured from locally produced coca leaf (due to imports and exports actual amounts of cocaine manufactured in a country can differ).

(g) Colombian cocaine production estimates for 2004 and later are based on new research and cannot be directly compared with previous years.

(h) Figures from 2003 to 2005 were revised in 2007 based on updated information available on the amount of coca leaf necessary to produce one kilogramme of cocaine HCl.

Fig. 45: Global coca bush cultivation (hectares), 1990 to 2007



Global area under coca cultivation increases in 2007

In 2007, the total area under coca cultivation in Bolivia, Colombia and Peru rose to its highest level since 2001. The 16% year-on-year increase brought the total area under cultivation to 181,600 ha. The increase itself was led by a 27% increase in the area under cultivation in Colombia, followed by smaller increases of 5% and 4% in Bolivia and Peru respectively. Despite these recent increases, the global area under coca cultivation continues to be lower than in the 1990s and 18% below the level recorded in 2000 (221,300 ha).

Fifty-five per cent of coca bush was cultivated in Colombia, followed by Peru (30%) and Bolivia (16%). In 2007, Colombia remained the world's largest coca cultivating country with 99,000 ha of coca bush, an increase of 27%, or 21,000 ha, over 2006.

Seventy five per cent of the total increase in area under cultivation in Colombia occurred in the Pacific and Central regions. The Pacific region had the largest areas under cultivation in 2007 with 25,960 ha, followed by the Putumayo-Caquetá, Central, and Meta-Guaviare regions. Together, these four regions represented 89% of the total area under coca cultivation in Colombia.

In 2007, coca cultivation in Peru increased by 4% to 53,700 ha. Coca cultivation remained well below the levels registered throughout the mid 1990s, when Peru was the world's largest cultivator of coca bush. Coca cultivation in Peru's three largest coca regions, which together represented 86% of the total area under coca bush, remained relatively stable. The smaller coca cultivating regions were responsible for most of the 4% increase reported in 2007.

Bolivia still trails behind Colombia and Peru, in terms of total area under cultivation. For a second consecutive year, coca cultivation increased in Bolivia, bringing the total area under cultivation to 28,900 ha in 2007. This 5% increase over 2006 brought the total area under cultivation to its highest level since 1998, when it was 38,000 ha. Overall, the total area under cultivation in Bolivia remained well under annual totals during the early and mid 1990s.

Although sizeable coca cultivation does not exist outside these three main countries, eradication reports from Governments in the region indicate that small-scale coca cultivation takes place in other countries in the region.

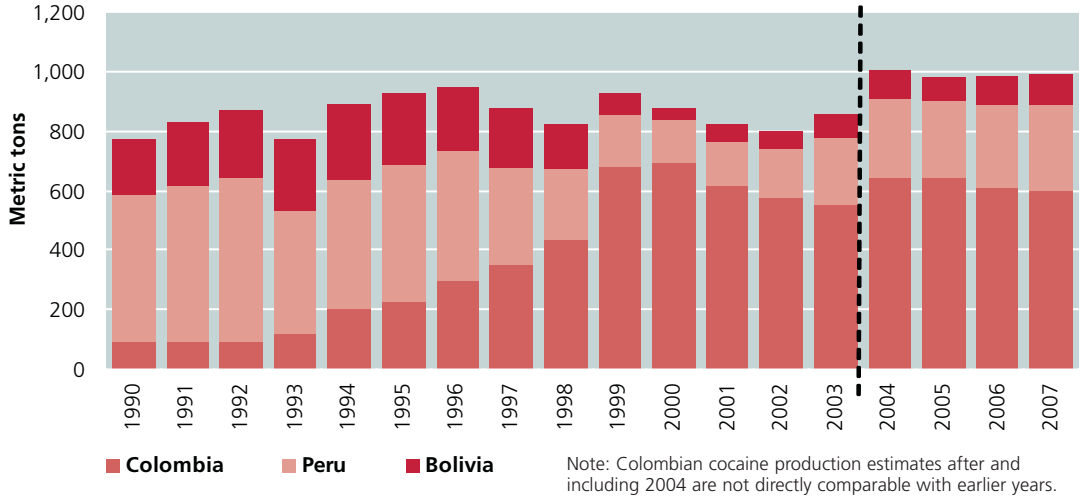
Cocaine production remains stable

Despite the large increase in area under coca cultivation recorded in Colombia, low yields seemed to limit production, keeping the global potential production of cocaine fairly stable. In 2007, global potential production of cocaine reached 994 mt, slightly above the 984 mt recorded for 2006. Of this total, 600 mt were produced in Colombia, 290 mt in Peru and 104 mt in Bolivia.

Prices estimated to be stable to increasing

In Peru, farm-gate prices of sun-dried coca leaf remained unchanged at US$ 2.5/kg in 2007. As in the previous six years, monthly average prices remained in the range of US$ 2 to US$ 3/kg. Coca leaf prices in Bolivia continued to be considerably higher than in Peru. In Bolivia, farm-gate prices for sun-dried coca leaf in the Chapare region increased considerably from US$ 3.2/kg in 2006 to US$ 3.8/kg in 2007, approaching levels reached in 2005 (US$ 4.1/kg). Comparing farm-gate prices of coca leaf in Colombia with prices for sun-dried leaf in Peru

Fig. 46: Global cocaine production (metric tons), 1990 to 2007



Note: Colombian cocaine production estimates after and including 2004 are not directly comparable with earlier years.

and Bolivia is difficult due to important differences in marketing: in Colombia coca is marketed either as fresh leaf or converted on the farm into coca paste. However, given the utility of price to market analysis, UNODC undertakes an annual comparison (mathematically converting fresh to sun-dried) which, this year, indicates that farm-gate prices for fresh coca leaf collected in Colombia are similar to those for Peru.

Prices of coca paste at the farm-gate increased in both Colombia and Peru, from US$ 853/kg in 2006 to US4 946/kg in 2007 in Colombia, and in Peru from US$ 559/kg to US$ 601/kg. As in the past four years, coca paste prices in Peru were considerably lower than in Colombia. In Colombian peso terms, coca paste prices declined by 5%, while the wholesale price of cocaine HCl increased in both peso and US dollar terms (by 10% and 25% respectively).

Little is known about the tightness of these markets and how price responsive they are, therefore it is difficult to say whether local prices have stabilised or not. Even the product prices themselves need to be interpreted with caution in the absence of detailed knowledge about their composition and quality. Also, in 2007, the national currencies in the three cocaine producing countries strengthened against the US dollar. The effects of this in combination with the higher costs of some farming and processing inputs are not entirely clear.

Destruction of illicit laboratories increases

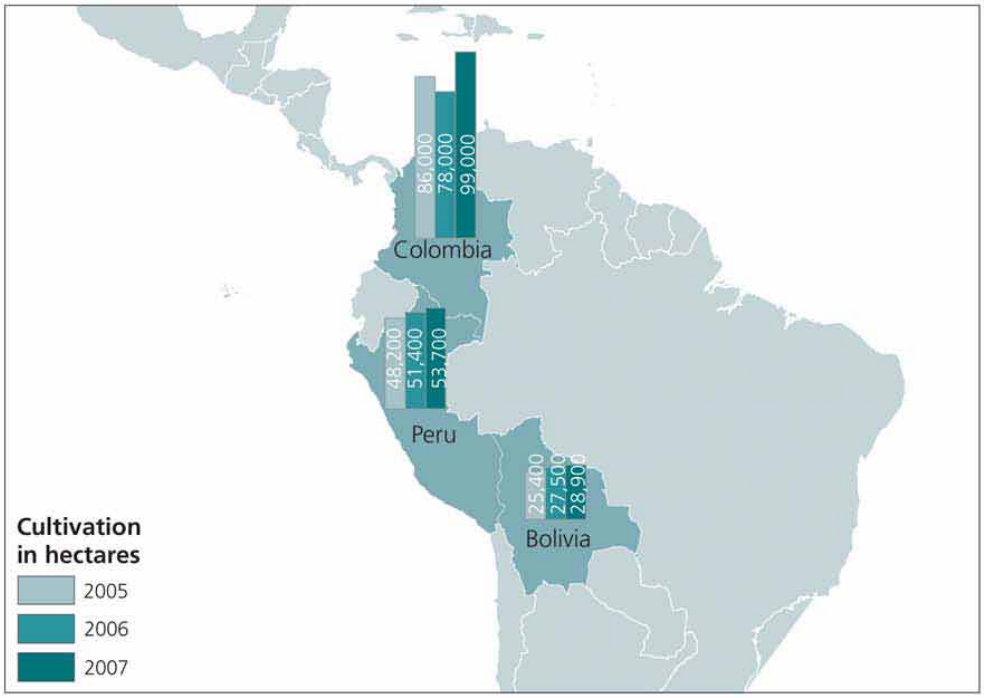
In 2006, Governments reported the destruction of over 6,390 clandestine coca processing laboratories worldwide, over 99 % of these were located in Bolivia, Colombia and Peru. The increase over the 5,901 laboratories destroyed in 2005 is mainly due to increases in Bolivia and Colombia. In addition, Bolivia and Peru destroyed large numbers of coca maceration pits.

The entire manufacturing cycle of cocaine HCl is more or less confined to the three coca cultivating countries, and there are very few reports of laboratories producing cocaine in other countries. Spain (10), the United States of America (4), Chile (2) and South Africa (1) reported the destruction of cocaine laboratories and the SAR Hong Kong reported the destruction of five 'crack' laboratories. Preliminary figures for 2007 indicate that the number of coca processing laboratories destroyed in Bolivia, Colombia and Peru stabilized at the 2006 level.

Colombia accounted for the largest volume of potassium permanganate seizures worldwide (99 mt) in 2006. Fifteen illicit clandestine laboratories producing this precursor, which is an essential ingredient for producing cocaine, were destroyed in the country. Smaller amounts of potassium permanganate were seized in Peru and Ecuador. Most of the potassium permanganate shipments intended for South America originated outside the region, with Argentina, Brazil and Chile being the major importers. Operation Purple, a comprehensive precursor control programme, is thought to have tightened the control of the international trade in potassium permanganate, which in turn, may have shifted international trafficking in the region to overland smuggling.[1]

1 International Narcotics Control Board, E/INCB/2007/4, p.13.

Map 9: **Coca bush cultivation, 2004-2007**



Map 10: **Potential cocaine production, 2004-2007**

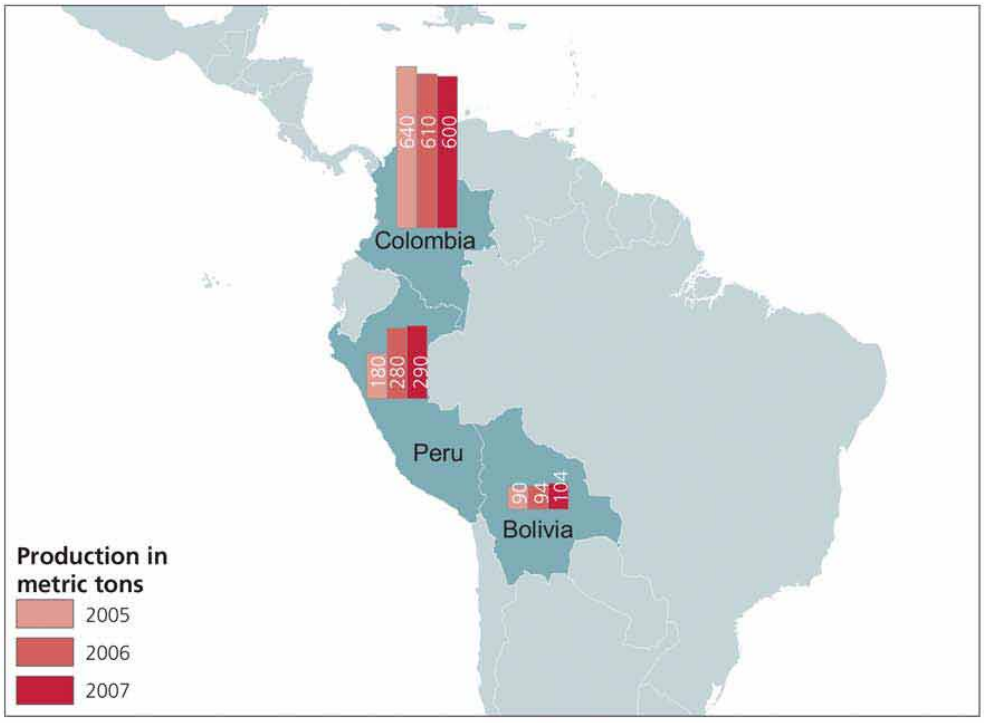
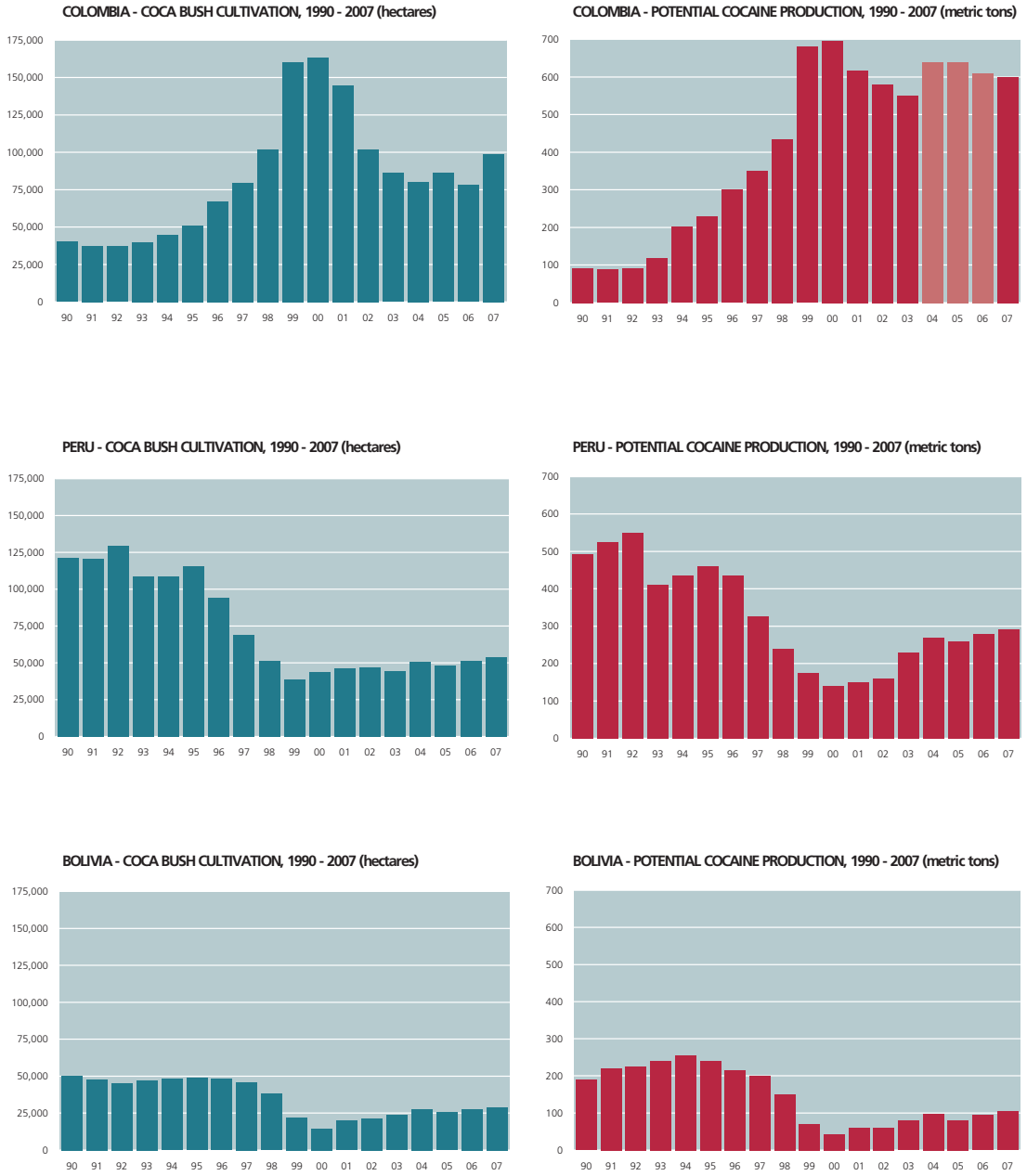


Fig. 47: Annual coca bush cultivation and cocaine production in main producing countries, 1990-2007



Estimates for Bolivia since 2003, for Colombia since 1999 and for Peru since 2000 come from national monitoring systems established by the respective Governments with the support of UNODC. Due to the change of methodology, these figures are not directly comparable with data from previous years. Colombian cocaine production estimates for 2004 and later are based on new research and cannot be directly compared with previous years.

Fig. 48: Coca bush cultivation (in per cent of global total)

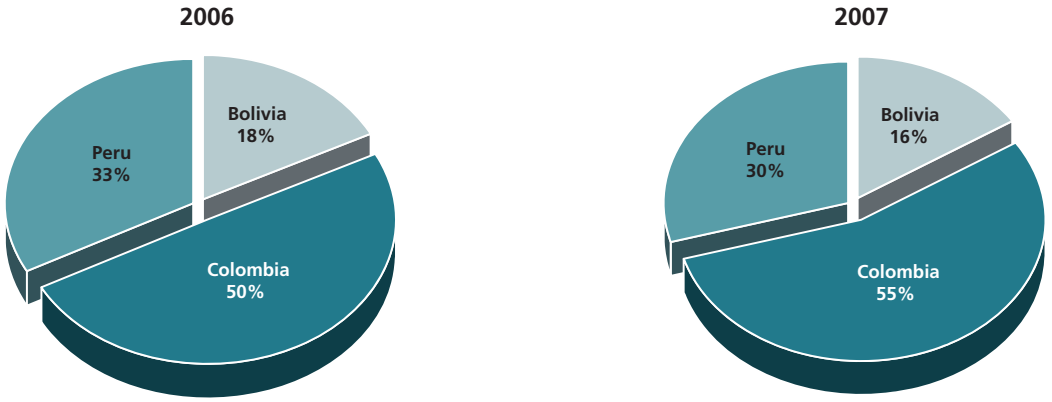


Fig. 49: Coca leaf production (in per cent of global total)

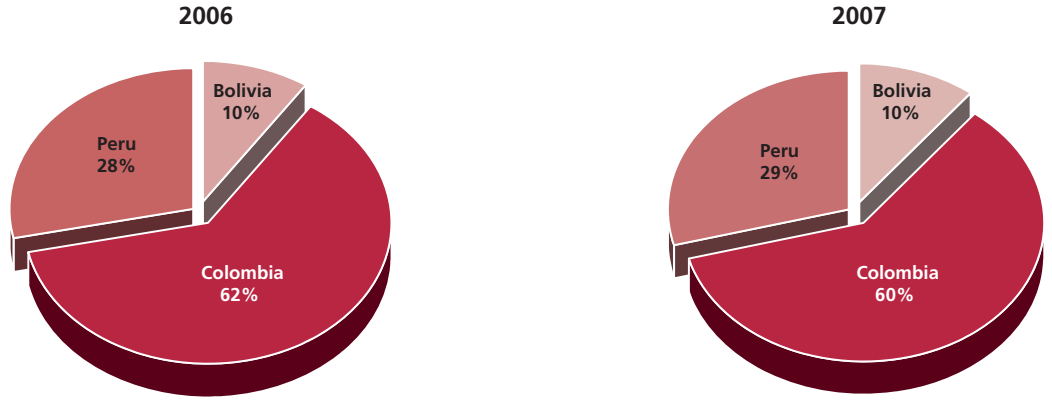


Table 6: Reported cumulative eradication of coca bush (ha), 1994-2007

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Bolivia	1,100	5,493	7,512	7,000	11,620	15,353	7,653	9,395	11,839	10,089	8,437	6,073	5,070	6,269
Colombia manual	1,033	1,487	4,057	2,262	3,126	1,046	3,495	1,745	2,762	4,219	6,234	31,980	43,051	66,805
Colombia spraying	3,871	23,915	18,519	41,861	66,029	43,112	58,073	94,153	130,364	132,817	136,552	138,775	172,026	153,134
Peru	–	–	1,259	3,462	7,834	14,733	6,208	6,436	7,134	11,312	10,399	12,237	12,688	12,072
Ecuador	–	–	–	–	–	–	–	–	–	–	4	18	9	36
Venezuela	–	–	–	–	–	–	–	–	–	–	118	40	0	–

1.3.3 Trafficking

Global seizures of cocaine fell slightly in 2006

Cocaine seizures (at street purity levels) fell 6%, from their record high of 750 mt in 2005, to 706 mt in 2006, reversing the previous upward trend. Global cocaine seizures are twice as high as they were a decade ago, which is impressive given the overall stability in cocaine production over the same period. This is thought to be the result of greater efficiency in law enforcement services and improved sharing of intelligence information, both of which enable seizures to be made before the cocaine reaches its final destination.

The global cocaine interception rate remains high

As a result, the calculated global cocaine interception rate remained near 42 % in 2006[1], up from 29 % in 1998. A portion of this increase is due to improvements in law enforcement. However, a small portion may also be due to the double counting of seizures when more than one law enforcement agency is involved (e.g. customs and police). The potential for double counting becomes greater when different countries work together and report the same seizure(s). As cooperation among the various law enforcement agencies has increased in recent years, the likelihood of double counting of cocaine seizures increased as well.

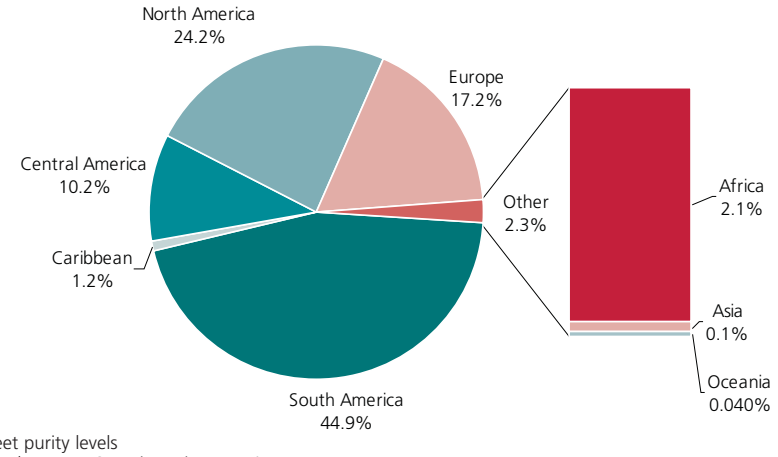
Cocaine seizures remain concentrated in the Americas and in Europe

Globally, most cocaine is seized in the Americas (81%). South America, where most cocaine is manufactured, accounted for 45 % of global seizures in 2006. North America, the world's largest cocaine market, accounted for 24%. Central America and the Caribbean, which are major transit regions, accounted for 11 % of global seizures.

The only large market outside of the Americas is Europe. Seventeen per cent of global cocaine seizures were made in Europe in 2006, and 99 % of these were made in West and Central Europe.

The rest of the world was responsible for about 2 % of global seizures and more than 90% of these were reported by countries in Africa.

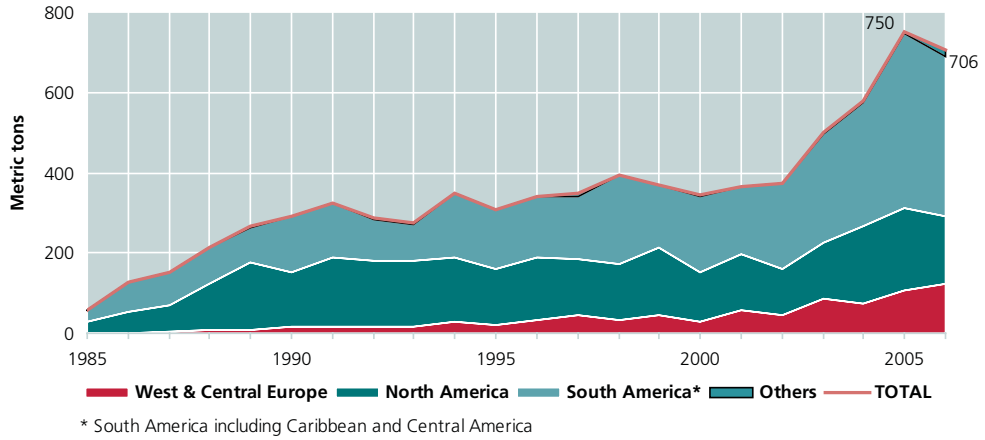
Fig. 49: Distribution of global cocaine seizures[(a)] in 2006 (N = 706 metric mt)



(a) as reported, at street purity levels
Source: UNODC, Annual Reports Questionnaire Data / DELTA.

1 The global interception rate was calculated on the basis of a global cocaine production of 984 metric mt in 2006 and global seizures of 706 metric mt at street purity, which – given a global average cocaine purity of 59% in 2006 (as reported by member states to UNODC in the annual reports questionnaire) - would be equivalent to pure cocaine seizures of some 416 metric mt.

Fig. 50: Global cocaine seizures[(a)] regional breakdown, 1985-2006



(a) as reported, at street purity levels
Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Seizures fell in South America and the Caribbean in 2006

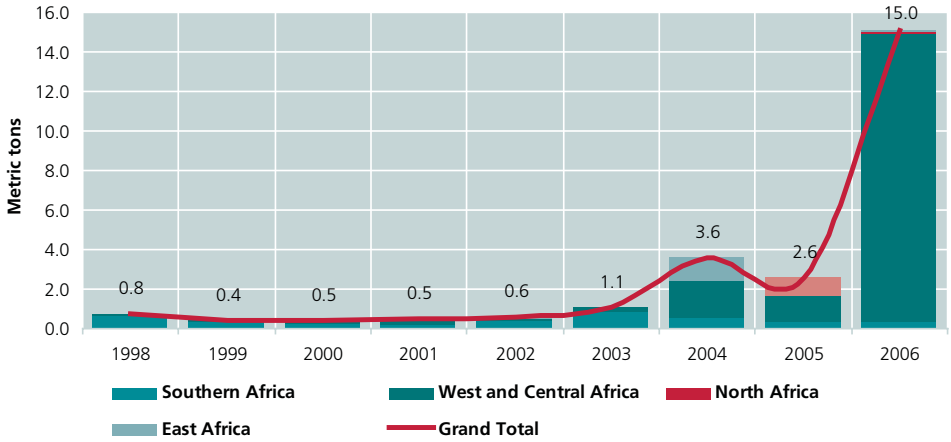
In the Americas cocaine seizures declined 11% from the record levels reported in 2005. Only Central America saw an increase in 2006. Cocaine seizures fell in South America (-17%), the Caribbean (-27%) and in North America (-18%).

South American cocaine seizures rose from 31 % of global seizures in 1996 to 45% in 2006, reflecting the growing efforts made by coca producer countries and their neighbours to improve interdiction efforts close to source.

The bulk of South American cocaine seizures, 181 mt, are carried out by Colombia. This figure is equivalent to 26% of global cocaine seizures. Colombian seizures represent 57% of South American cocaine seizures and 84% of coca-base and cocaine HCL seizures made in the three Andean countries which produce coca leaf for cocaine production.

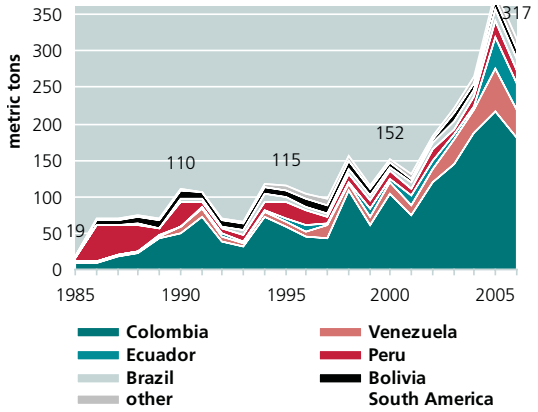
Large seizures in South America are also undertaken by Venezuela (39 mt), Ecuador (34 mt), Peru (19 mt) and Brazil (14 mt). Cocaine seizures in all of these countries declined in 2006 as compared to a year earlier. Increases in cocaine seizures were reported from Bolivia, Chile, and Uruguay and, to a lesser extent, Argentina and Paraguay, suggesting that trafficking to and/or via the Southern Cone may have increased in 2006.

Fig. 51: Cocaine seizures in Africa, 1998-2006 (N = 215 metric mt)



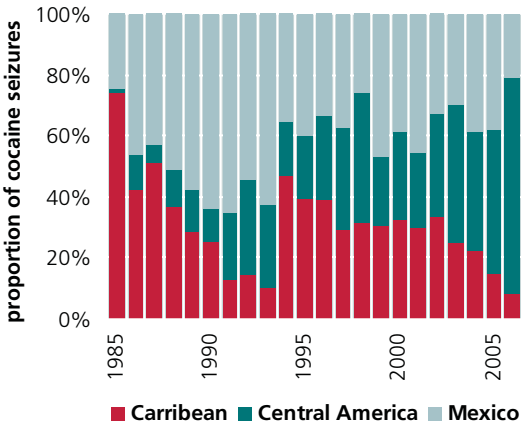
Source: UNODC, Annual Reports Questionnaire Data / DELTA

Fig. 52: Cocaine seizures[a] in South America, 2005-2006



(a) as reported, at street purity levels
Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Fig. 53: Cocaine seizures in main transit zones to USA and Canada, 1985-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

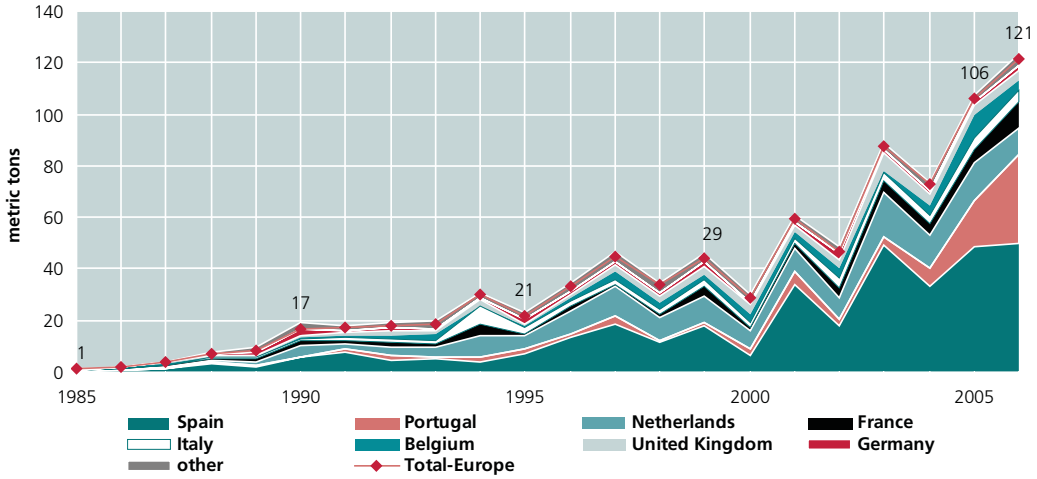
Seizures shifted away from the Caribbean and towards Central America

There has been a strong increase in seizures made by the countries of Central America (+88% in 2006) and an on-going decline of seizures made in the Caribbean region. Cocaine seizures undertaken by Mexico also declined in 2006. These trends are consistent with longer-term shifts. Taking the seizures reported in the main transit zones to the US and Canadian markets as 100%, the proportion of seizures undertaken in the Caribbean declined from 74% in 1985 to 33% in 2000, and from 15% in 2005 to 8% in 2006. In contrast, the proportion of seizures undertaken in Central America increased over the same period from 1% in 1985 to 29% in 2000, and from 48% in 2005 to 71% in 2006. This corresponds with the regional trend of seizures being made increasingly closer to source. Most of the increase in 2006 was due to large seizures made by Panama. The proportion of seizures made by Mexico rose from 25% in 1985 to 39% in 2000, but fell back to 21% by 2006.

Cocaine seizures continue rising in Europe

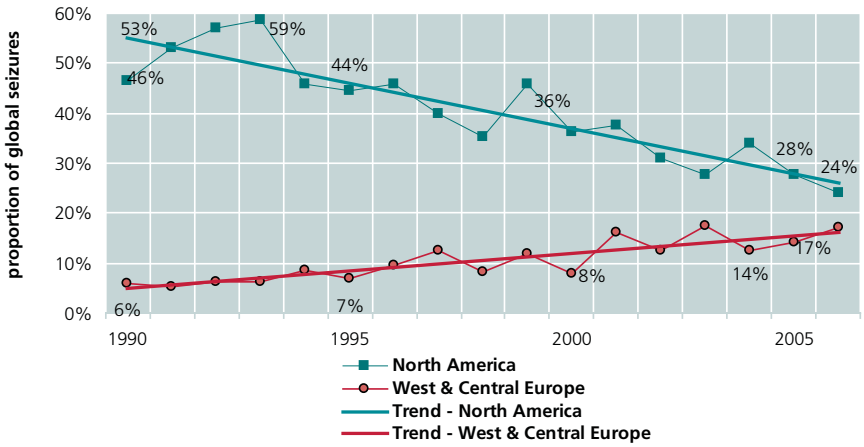
Cocaine seizures in Europe rose by 14 % in 2006, reaching a new record high of more than 120 metric mt. Cocaine seizures in Europe have been increasing steadily since 1980 parallel to the overall expansion of the market in Europe. Europe's share of global cocaine seizures rose from less than 3% in 1980 to 8% in 2000, and from 14% in 2005 to 17% in 2006.

Fig. 54: Cocaine seizures in Europe, 1985-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Fig. 55: Proportion of global seizures made in North America and in West & Central Europe, 1990-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA

Seizures decline significantly in North America as the market contracts

Seizures declined by 18% in North America in 2006. The proportion of North American seizures in global cocaine seizures declined from 46% in 1990 to 36% in 2000, and from 27% in 2005 to 24% in 2006. The stabilization or decline in North America has occurred in conjunction with increased efforts to strengthen the interdiction capacities of source and transit countries, again with the objective of seizing drugs before they arrive in the final destination countries.

Surveys and intelligence reports identify a cocaine shortage in the USA in 2007

The stabilization/decline of supply of cocaine in North America is also reflected in student survey data. Student surveys suggest that strong eradication efforts in the Andean region and increased interdiction efforts in the main drug transit countries have had a measurable impact on cocaine availability within the USA. The availability of cocaine, as perceived by US 8th, 10th and 12th grade high-school students, declined over the last decade. The proportion of students who found it 'easy' or 'fairly easy' to obtain cocaine fell from 38% in 1998 to 32% in 2007.

Major shortages of cocaine across the United States for the year 2007 based on information from federal, state and local enforcement agencies were also reported by the US National Drug Intelligence Centre. The information from law enforcement agencies was confirmed by a number of demand indicators, including drug testing and emergency room visits. Investigators in the 38 drug markets which described cocaine shortages, reported that drug distributors were often unable to obtain their regular supplies of cocaine. Law enforcement assessments also indicated that the decrease in availability was accompanied by a corresponding increase in cocaine prices and a decrease in cocaine purity. Some reported prices increased as much as 100%.[2]

Drug Enforcement Administration (DEA) reports indicated that the price per pure gram of cocaine rose 44 % between January and September 2007. In parallel, cocaine purity levels fell. The cocaine shortage was also confirmed in the 2008 National Drug Control Strategy Report of the United States. Based on available intelligence it was argued that the cocaine shortage was the cumulative result of control efforts in the source and transit zones. Dedicated efforts by the Government of Colombia, massive seizures of cocaine in transit, and aggressive Mexican and U.S. law enforcement efforts targeting large Mexican drug trafficking organizations are thought to have disrupted the flow.[3] The escalation of the internal fights among the various competing Mexican drug cartels in 2007 also contributed to this temporary cocaine shortage in 2007.[4]

Large seizures remain concentrated in a few countries

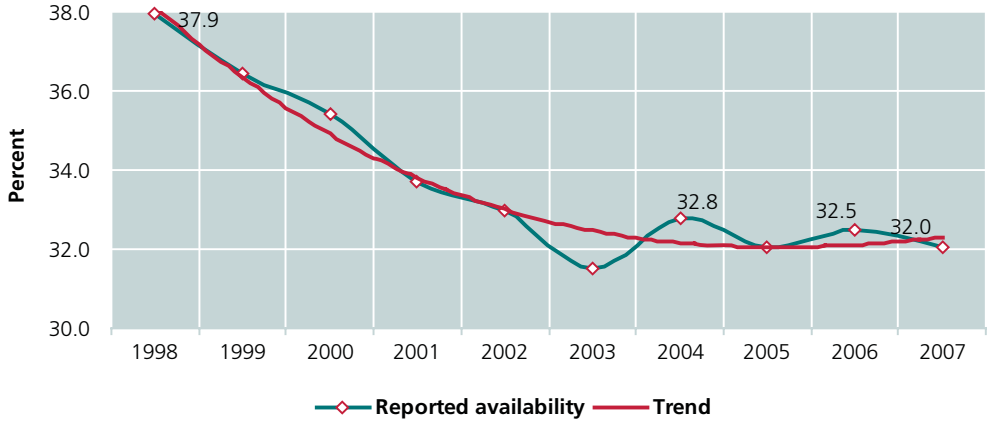
While there are a growing number of countries reporting cocaine seizures, the largest amounts of cocaine are still seized in a limited number of countries. The five countries with the largest cocaine seizures accounted for 64% of global cocaine seizures in 2006.

2 US Department of Justice, *National Intelligence Center, National* Drug Threat Assessment 2008, October 2007.

3 ONDCP, *National Drug Control Strategy, 2008 Annual Report,* Washington February 2008.

4 US Department of Justice, *National Intelligence Center, National Drug Threat Assessment 2008*, October 2007.

Fig. 56: Perceived availability* of cocaine among US high school students, 1998-2007



*unweighted average of 8th, 10th and 12th grade students reporting that it is 'fairly easy' or 'very easy' to obtain cocaine powder.
Source: NIDA, *Monitoring the Future*

For the fifth year in a row, Colombia undertook the world's largest cocaine seizures, seizing 181 mt of cocaine hydrochloride and cocaine base in 2006, equivalent to 26% of the world total. The interception rate of cocaine produced in Colombia amounted to 30% in 2006, up from 13% in 2000. Seizures of cocaine hydrochloride amounted to 130 mt in 2006. The second largest cocaine seizures took place in the United States (147 mt). The US share in global cocaine seizures has declined from 46% of global seizures in 1985 to 36% in 1995, and from 23% in 2005 to 21% in 2006. In 2006, Spain continued to seize the largest amount of cocaine in Europe and accounted for 7% of global seizures (50 mt). Since 2001, Spain has recorded either the third or the fourth largest annual cocaine seizures at the global level. Important transit countries ,Venezuela and Panama seized 6% of the total or 39 mt, and 5% of the total or 36 mt, respectively.

The majority of cocaine still flows from the Andean region to North America

The world's main cocaine trafficking routes continue to run from the Andean region, notably Colombia, to the United States. Frequently quoted estimates among enforcement agencies in recent years suggested that some 450 mt of cocaine (46% of production in 2006) may be destined for markets in North America[5] (trend falling) and some 250 mt (25% of production) for markets in Europe (trend rising)[6]. Most of the remainder is seized in the coca producing countries (215 mt of cocaine base and salt in 2006, or less than 170 mt expressed in pure cocaine) or consumed in South America.[7]

The US 'Interagency Assessment of Cocaine Movement' (IACM) assumes higher shipment figures of cocaine towards North America. Estimates by the IACM suggest that between 530 and 710 mt of cocaine may have departed South America towards the United States in 2006[8]. Out of this amount some 90% is thought to have transited the Mexico-Central America Corridor in 2006. The IACM assumes that 66% of the cocaine departing South America towards the USA in 2006 moved through the Eastern Pacific Vector, more than a year earlier (50%).

In 2006, traffickers began increasingly using overland routes to transport cocaine from Colombia through Venezuela and Ecuador to the United States of America and Europe.[9] Fifty four per cent of the cocaine was seized on the overland route and 44% was seized at sea.[10] The Colombian authorities estimate that 78%

5 UNODC, *World Drug Report 2007*, June 2007.

6 Direction Centrale de la Police Judiciaire / Police Nationale, '*The Traffic of Cocaine through the Maritime Channel in 2006*', presentation given by the French delegation to the Commission on Narcotic Drugs, 12-16 March 2007. A 250 metric ton figure of cocaine destined for Europe has also been repeatedly quoted by Europol as an estimate for Europe.

7 The actual amounts available for consumption are substantially lower than the 450 mt targeted for markets in North America. For the year 2000, the Office of National Drug Control Policy estimated that the cocaine available for consumption in the USA amounted to 259 metric mt. (Office of *National Drug Control Policy, National Drug Control Strategy, Data Supplement, Feb. 2003*). As there are no indications that the market has expanded since, a figure of around 250 metric mt would seem to be a reasonable estimate of the size of the US market in terms of actual consumption.

8 US Department of Justice, National Intelligence Center, National Drug Threat Assessment 2008, October 2007.

9 'Country Report – Colombia', Meeting of Heads of National Drug Law Enforcement Agencies, Latin America and the Caribbean (HONLAC), Quito Ecuador, 15-19 October 2007.

10 UNODC, Annual Reports Questionnaire (Colombia), for the year 2006.

may be eventually trafficked by sea, mostly going by go-fast vessels (65%). They also estimate that 55% of the cocaine produced in South America is transported along the Mexico-Central America corridor towards North America, while 35% of the cocaine produced and shipped from the coasts of Colombia, Venezuela, the Guyanas and Brazil is trafficked via the European/African corridor.[11]

Mexico is the main transit country of cocaine shipments to North America. Trafficking to Mexico and further on to the United States declined, however, in 2006 and 2007. About 52% of cocaine was trafficked to Mexico by sea in 2006, another 18% by land from Central America (Guatemala and Belize) and 30% by air. These figures suggest that 2006 saw a decline in trafficking by sea and by land and – in relative terms – an increase in trafficking by air as compared to a year earlier. Aircrafts often bring cocaine into Mexico from Venezuela, Colombia and from countries in Central America, notably Guatemala.[12] Important entry points for cocaine into Mexico by sea continue to be the Pacific region and the peninsula of Yukatan on the Atlantic coast. From there, the drug is usually transported by land northwards. In volume terms, most cocaine shipments are by sea. In terms of cases, most seizures are for deliveries by land. About 90% of the cocaine is destined for the USA, 7% is destined for Europe (often by air to Spain, Belgium, Germany, France and Italy) and 3% is for local consumption.[13]

The US authorities estimate that around 90% of the cocaine, which entered their country in 2006, transited the Mexico-Central America corridor. The amounts of cocaine trafficked into the United States declined, however, in 2006 and this trend became more pronounced in 2007 as Mexican authorities stepped up efforts to fight the drug cartels operating on their territory, which also increased the level of cocaine related violence in Mexico. US cocaine seizures along the country's southern border declined by 20% over the first two quarters of 2007 on a year earlier and by almost 40% in the second quarter of 2007, as compared to the second quarter of 2006. The main entry point of cocaine into the United States continues to be the common border of Mexico with southern Texas (accounting for a third of all seizures along the border with Mexico in 2006), followed by the border with southern California (18%).[14]

11 'Country Report – Colombia', Meeting of Heads of National Drug Law Enforcement Agencies, Latin America and the Caribbean (HONLAC), Quito Ecuador, 15-19 October 2007.

12 'Country Report – Mexico', Meeting of Heads of National Drug Law Enforcement Agencies, Latin America and the Caribbean (HONLAC), Quito Ecuador, 15-19 October 2007.

13 UNODC, Annual Reports Questionnaire (Mexico), for the year 2006.

14 US Department of Justice, National Intelligence Center, *National Drug Threat Assessment 2008,* October 2007.

Trafficking from the Andean region to Europe continues

The Colombian authorities estimated that around 35% of the cocaine produced and shipped from the coasts of Colombia, Venezuela, Brazil and the Guyanas is trafficked via the European/African corridor.[15] Colombia still dominates ARQ mentions as the main source country for cocaine arriving in Europe. Taking only mentions of the three Andean countries, Colombia accounted for more than half of all such mentions from European countries in 2006. The most frequently mentioned transit countries in the ARQ in South America were Venezuela, followed by Ecuador, Mexico, Brazil, the Netherlands Antilles, Suriname and the Dominican Republic in 2006.

Based on individual drug seizures reported to UNODC, most of the cocaine intercepted in Europe could be traced back to Venezuela in 2006 (36% of seizures, in weight terms, for which the origin was known), followed by Colombia (17%), the Dominican Republic (5%), Brazil (3%), Ecuador (3%), Argentina (3%) and Peru (3%). The ranking for 2007 started again with Venezuela (44%), followed by Panama (11%), Colombia (5%), the Dominican Republic (4%), Peru (4%), Brazil (2%), Argentina (2%), Bolivia (1%), Mexico (1%) and Costa Rica (1%).

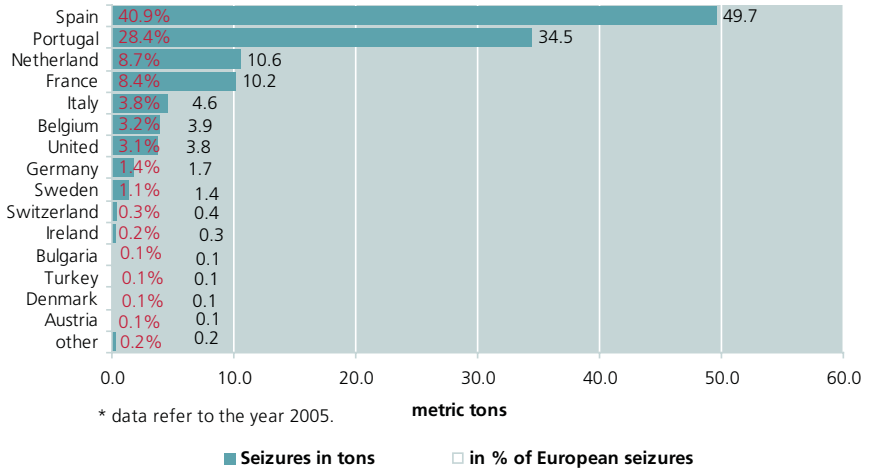
Spain and Portugal are the main entry points into Europe

In 2006, European cocaine seizures reached 122 mt, their highest level ever. This represented a 14% increase on a year earlier, and was consistent with the average annual growth rate over the 1996-2006 period. Despite this ongoing growth in seizures, cocaine prices have not increased and purity levels have not deteriorated in Europe over the last decade. This is a strong indication that the availability of cocaine has increased in Europe.

Spain continues to be the main entry point for cocaine into Europe. In 2006, Spain reported cocaine seizures of 50 mt, accounting for 41% of all such seizures made in Europe. This was the highest volume of cocaine seized by a European country ever. Sixty six per cent of Spanish seizures were made while the cocaine was still at sea; 11% were made in containers and 6% at airports in 2006. Traditionally, most cocaine was seized along the northern Atlantic coast of Spain, notably in Galicia. Over the last few years, cocaine increasingly entered the country via southern Spain (Andalusia) as well as via Madrid (by air) and via Barcelona and Valencia. In addition, there is also some local manufacture of cocaine in Spain. Spain reported the dismantling of 10 cocaine

15 'Country Report – Colombia', Meeting of Heads of National Drug Law Enforcement Agencies, Latin America and the Caribbean (HONLAC), Quito Ecuador, 15-19 October 2007.

Fig. 57: Cocaine seizures in Europe in 2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA

laboratories in 2006, about the same as a year earlier (11), up from 4 in 2001.

Shipments of cocaine to Spain were reported to have left South America mainly from Venezuela (31% of seizures of known origin in weight terms in 2006), followed by the Dominican Republic (8%), Ecuador (6%), Brazil (5%), Argentina (5%) and Colombia (4%). Drug trafficking groups of Colombian origin dominate the trafficking operations. Members of such groups also accounted for the largest number of cocaine related arrests among foreigners in Spain (23% in 2006), ahead of members of Moroccan groups (11%) and of groups from the Dominican Republic (6%), Romania (3%), the UK (2%), Portugal (2%) and Italy (2%).

The rather high level of arrests of Moroccans and Portuguese point to the increasing role of trafficking of cocaine through Western and Northern Africa to Spain and Portugal. The main new trend for the last three to four years has been the growth in cocaine shipments via West Africa – typically off the coasts of Cape Verde, Guinea Bissau and the Canary Islands, as well as to various countries along the Gulf of Guinea, including Ghana, Cote d'Ivoire, Togo, Nigeria, and, further west, Guinea, Sierra Leone, Liberia and Senegal, for subsequent deliveries to Europe, including Spain and Portugal.

Portugal has become another major gateway for cocaine destined for European markets. Portugal reported 35 mt of cocaine seizures in 2006, equivalent to 35% of all European cocaine seizures in 2006. Large volumes of European cocaine seizures were also undertaken by the Netherlands (11 mt), France (10 mt) and Italy (5 mt).

Portugal's cocaine seizures basically doubled in 2004, in 2005 and in 2006 (rising from 3 mt in 2003 to 7 mt in 2004, 18 mt in 2005 and 35 mt in 2006). The large seizures made by the authorities in Portugal are mainly linked to the rising importance of West Africa, including some of the Portuguese speaking countries, such as Cape Verde or Guinea Bissau. Cocaine is smuggled to these countries from the Andean region, often via Venezuela, Brazil and Western Africa to Europe. Foreigners arrested in Portugal for cocaine trafficking in 2006 were mainly from Cap Verde (19%), Venezuela (14%), Brazil (13%), Guinea Bissau (5%), as well as Angola (1%) and Sao Tome and Principe (1%). In addition, European traffickers were arrested trying to smuggle cocaine out of Portugal. These arrests included citizens from Spain (13%) and the Netherlands (6%). Individual seizures reported by Portugal to UNODC in 2007 suggested that 99% of the cocaine shipped to Portugal transited African waters. Most shipments were reported to have originated in Senegal and Guinea Bissau in 2007.

Cocaine trafficking via West Africa emerges as a serious problem

The most striking new trend in cocaine trafficking in recent years has been the rising importance of Africa, notably of West and Central Africa, as a transit area for cocaine shipments to Europe. Seizures made in Africa rose from less than 1 mt over the 1998-2002 period to 15 mt in 2006. Most of the increase took place in 2006.[16] The largest African cocaine seizures were

16 The massive increase of seizures shown for West and Central Africa in 2006 was to a large extent due to one major seizure in 2006 reported by Nigeria. This concerned a shipment of cement mixed with cocaine. Samples analyzed by the Nigerian authorities identified cocaine. Other samples analyzed later by the US Drug Enforcement Agency failed, however, to confirm the existence of cocaine. This could indicate that not all of the 14.2 mt may have been cocaine. On the other hand, a number of other West and Central African countries which had growing and important amounts of cocaine seizures according to press reports, did not fill in the Annual Reports Questionnaire, and these seizures are thus not included in the total.

reported by Nigeria, followed by Ghana, South Africa, Morocco and Cap Verde in 2006. In addition, Guinea Bissau emerged in recent years as an important cocaine trafficking hub. Out of the 33 African countries that provided seizure statistics in 2006 to UNODC, 25 African countries, or 76%, reported seizures of cocaine, up from 34% in 1990.

African cocaine seizures are now equivalent to 2.1% of the global total, up from 0.3% in 2005 and 0.1% in 2000. Since law enforcement in Africa is hampered by a lack of resources and other important factors, this marked increase may not fully reflect the actual trafficking flows through the region.

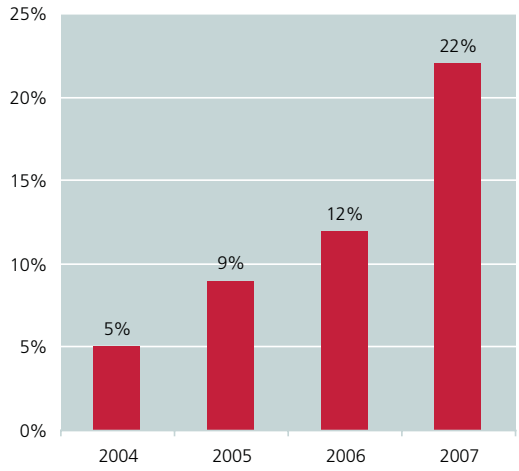
UNODC's database of individual drug seizures showed that, out of the total number cocaine seizures made in Europe in 2007 (where the 'origin' had been identified), 22% had been smuggled via Africa to Europe, up from 12% in 2006 and 5% in 2004. Criminal groups from West African countries continue to dominate the cocaine retail trade in a number of European countries.

The most frequently mentioned country of origin of cocaine trafficked to Africa is Colombia, followed by Peru. The most important transit country for cocaine seizures made in Africa is Brazil, followed by Venezuela.

Cocaine trafficking in Asia and the Oceania region increases but remains limited

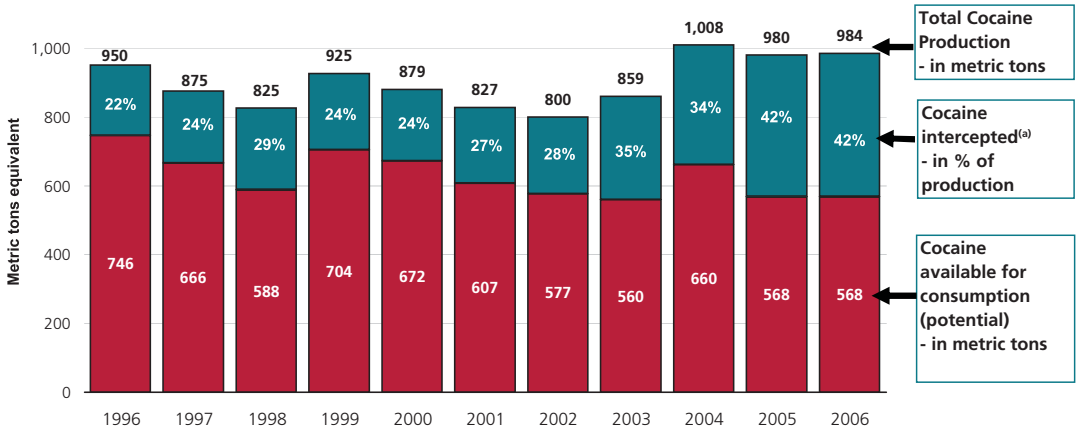
Although cocaine seizures almost doubled in Asia in 2005 and rose by a further 27% in 2006, they remained at very low levels compared to other regions (0.7 mt or 0.1% of global seizures). Seizures in the Oceania region tripled to 0.3 mt in 2006. The largest cocaine seizures in the Oceania region take place in Australia (252 kg in 2006 or 88% of all cocaine seizures in the Oceania region). The largest cocaine seizures in Asia in 2006 were made by China (358 kg), followed by India (206 kg), Thailand (36 kg), Hong Kong (15 kg), Iran (11 kg), Japan (10 kg) and Lebanon (9 kg). Out of 41 Asian countries which reported seizure information to UNODC, 18 countries (43%) reported seizures of cocaine in 2006. This is a far lower proportion than in the other continents. Cocaine manufacture in Asia is extremely rare. Nonetheless, a few clandestine cocaine-manufacturing laboratories were dismantled: 4 laboratories were dismantled in Hong Kong SAR of China in 2006 and one laboratory was dismantled in mainland China, close to the Hong Kong border.

Fig. 58: Proportion of individual cocaine seizures made in Europe that transited Africa, 2004-2007

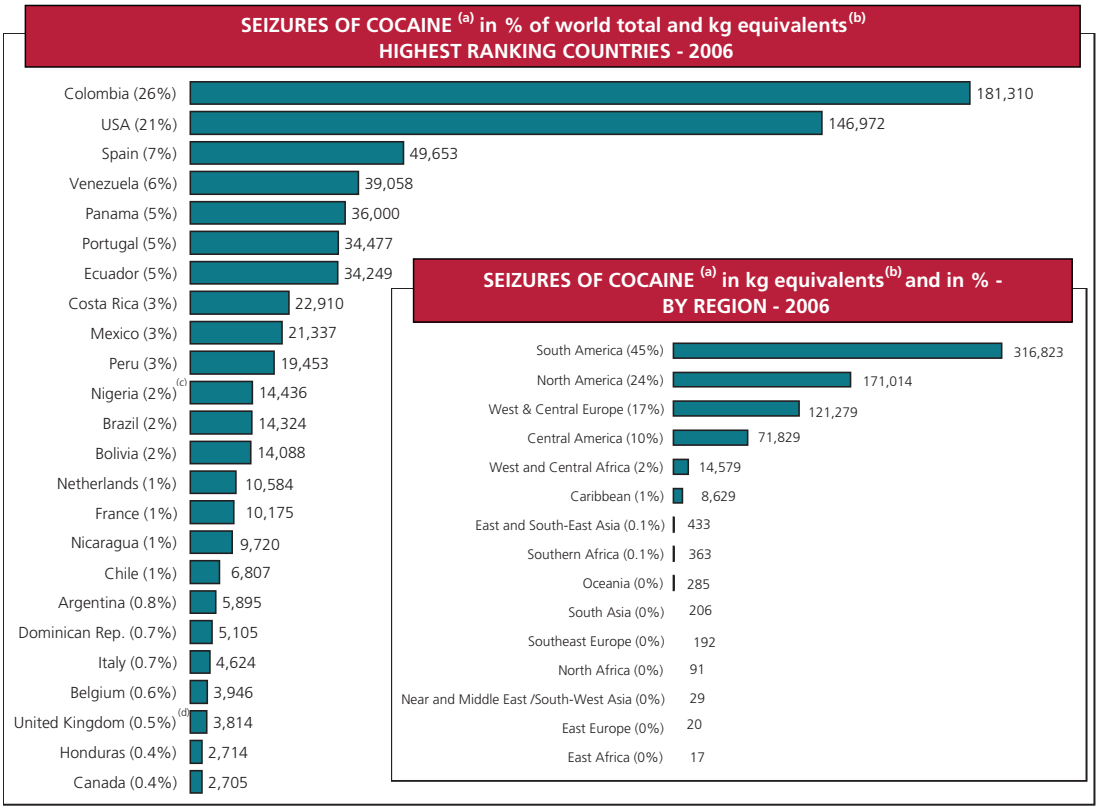


Source: UNODC, Individual drug seizures database.

Fig. 59: Global illicit supply of cocaine, 1996-2006



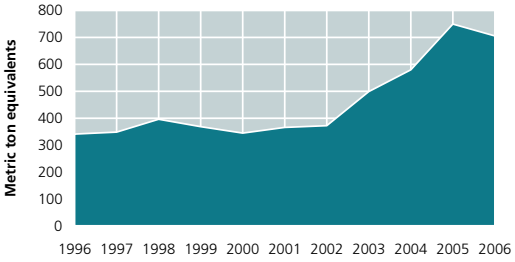
[a] Seizures as reported (street purity). Includes cocaine HCl, cocaine base, crack cocaine, and other cocaine types.



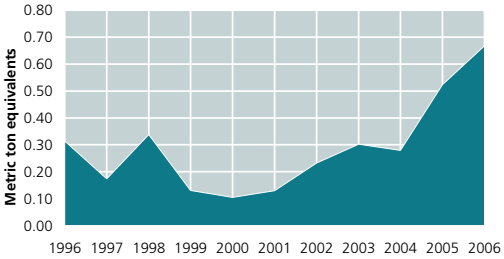
[a] Includes cocaine HCl, cocaine base, crack cocaine, and other cocaine types.
[b] Seizures as reported (street purity).
[c] Substance purity unknown.
[d] Data refer to 2005 England and Wales only.

Fig. 60: Global seizures of cocaine, 1996-2006

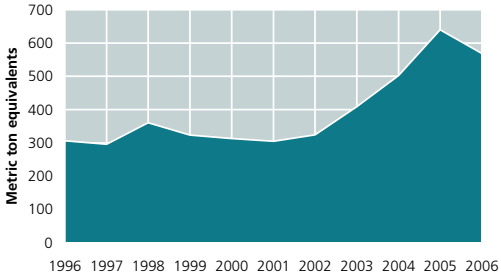
COCAINE INTERCEPTED - WORLD: 1996 - 2006



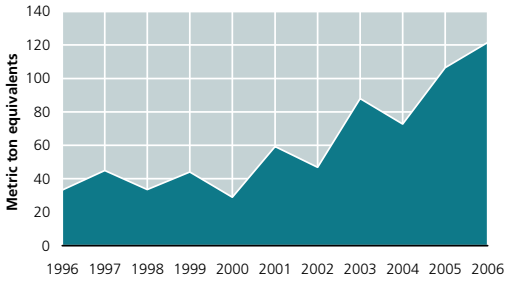
COCAINE INTERCEPTED - ASIA: 1996 - 2006



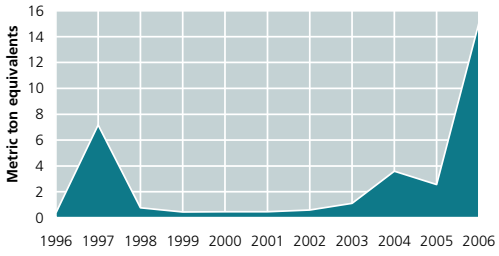
COCAINE INTERCEPTED - AMERICAS: 1996 - 2006



COCAINE INTERCEPTED - EUROPE: 1996 - 2006



COCAINE INTERCEPTED - AFRICA: 1996 - 2006



COCAINE INTERCEPTED - OCEANIA: 1996 - 2006

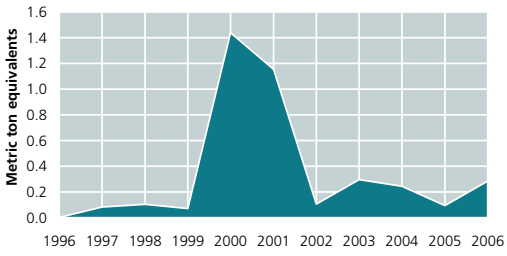
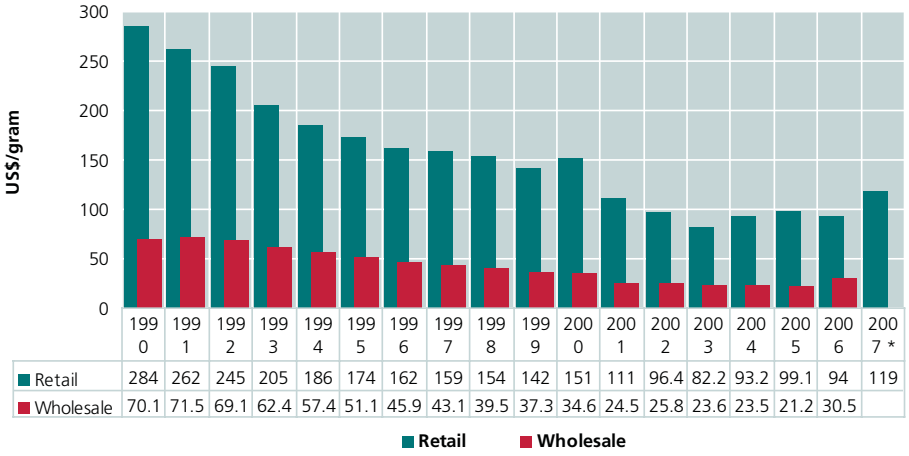
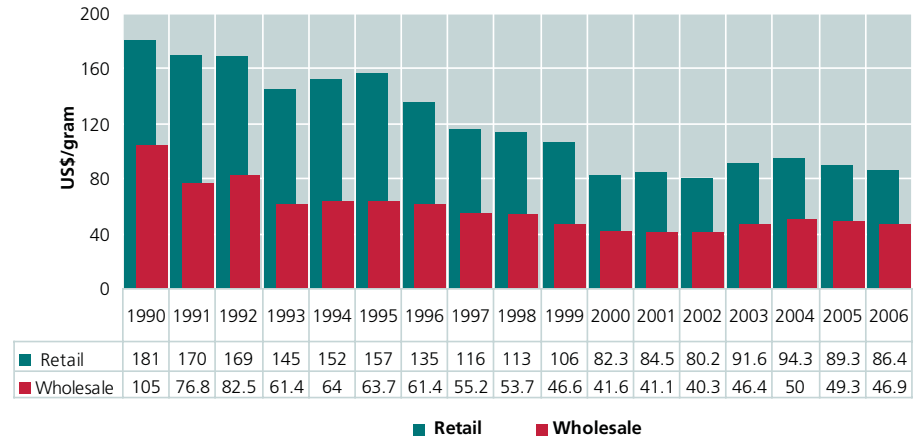


Fig. 61: USA: Cocaine retail and whole sale prices, 1990-2007 (US$/gram)



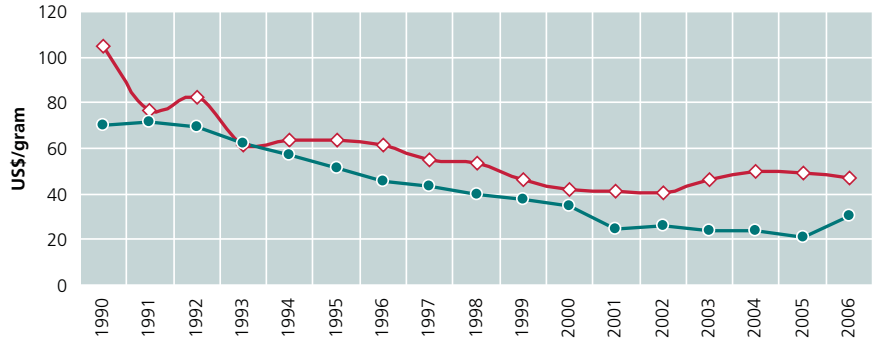
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007 *
Retail	284	262	245	205	186	174	162	159	154	142	151	111	96.4	82.2	93.2	99.1	94	119
Wholesale	70.1	71.5	69.1	62.4	57.4	51.1	45.9	43.1	39.5	37.3	34.6	24.5	25.8	23.6	23.5	21.2	30.5	

Fig. 62: EUROPE: Cocaine retail and whole sale prices, 1990-2007 (US$/gram)

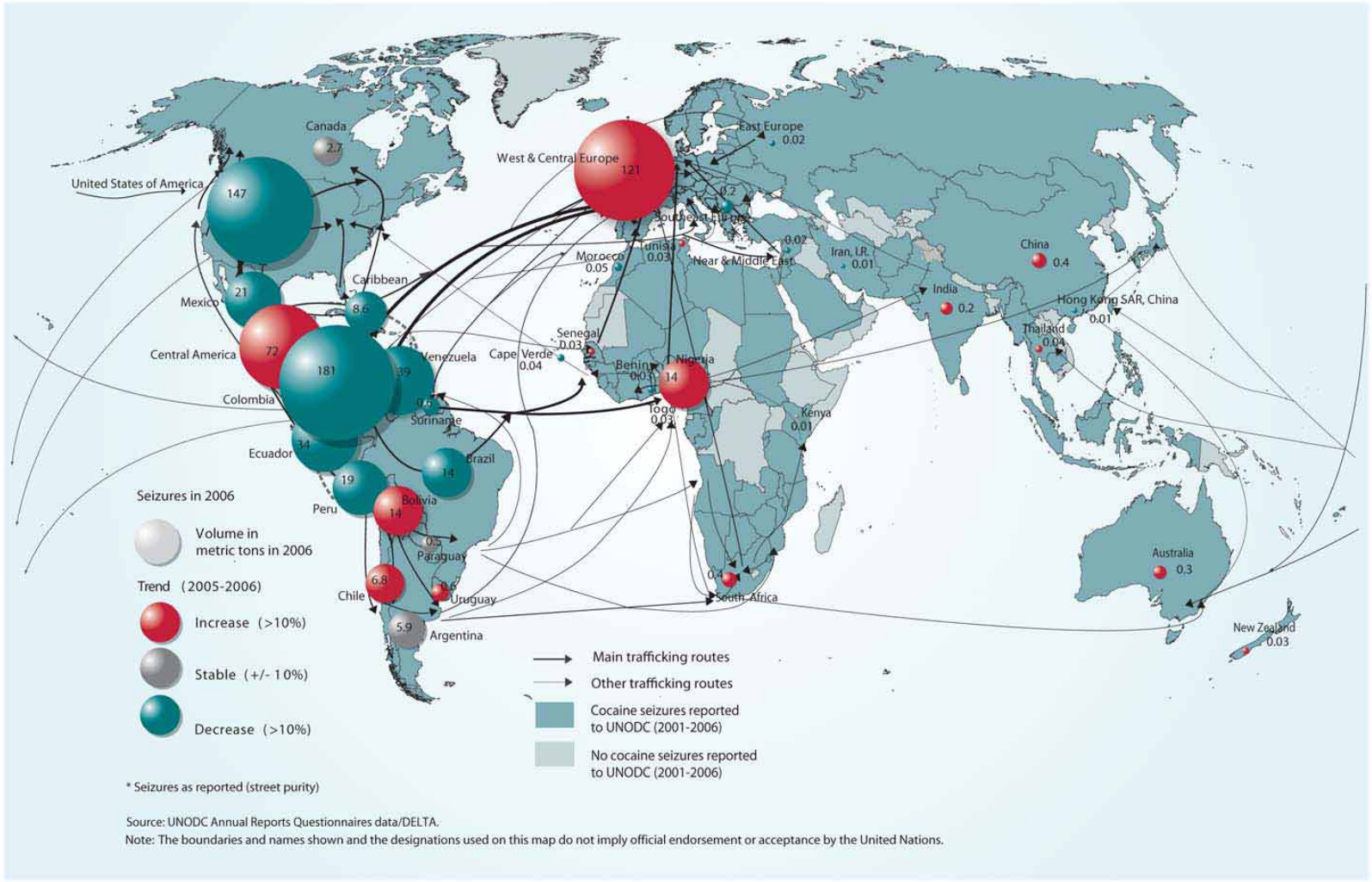


	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Retail	181	170	169	145	152	157	135	116	113	106	82.3	84.5	80.2	91.6	94.3	89.3	86.4
Wholesale	105	76.8	82.5	61.4	64	63.7	61.4	55.2	53.7	46.6	41.6	41.1	40.3	46.4	50	49.3	46.9

Fig. 63: Wholesale cocaine prices in Europe and the USA, 1990-2007 (US$/gram)



Map 11: **Trafficking in cocaine, 2006 (countries reporting seizures* of more than 10kg)**



* Seizures as reported (street purity)

Source: UNODC Annual Reports Questionnaires data/DELTA.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

1.3.4 Consumption

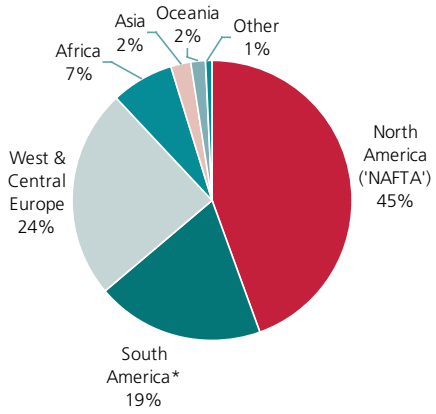
Global cocaine use largely stable

In 2006/07, an estimated 16 million people worldwide, or 0.4% of the global population aged 15-64, consumed cocaine. The largest numbers of cocaine users are found in North America (7.1 million people or 45% of the world total), followed by West & Central Europe (3.9 million people or 24%) and South America (including Central America and the Caribbean: 3.1 million or 19% of the total). Estimates for these regions are largely based on epidemiological research results. The same applies to estimates for the Oceania region (0.3 million or 2% of the total).

The estimate of cocaine users in Africa (1.1 million people), in contrast, is based on selected rapid situation assessments, 'guesstimates' by government officials and qualitative information. These estimates should be treated with caution. The same applies to estimates for Asia (0.3 million cocaine users).

The annual prevalence of cocaine use is highest in North America (2.4%). In 2006/07, the Oceania region (1.4%) has replaced West and Central Europe (1.2%) as the region with the second highest rates of prevalence for

Fig. 64: Annual prevalence of cocaine use in 2006/07, distribution by region (N=16.0 million)



* including Central America and Caribbean

Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

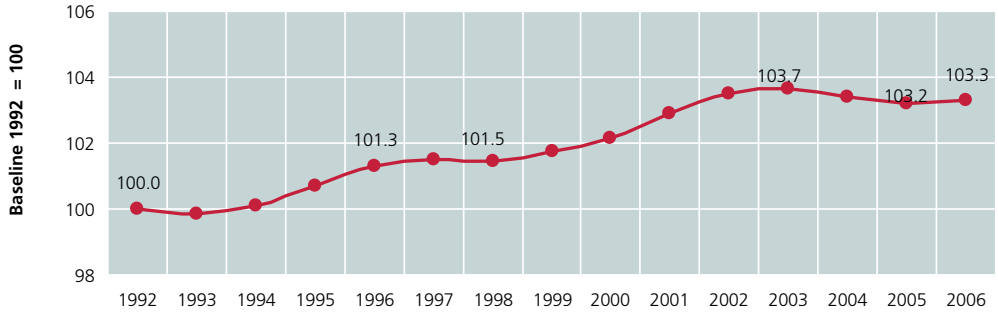
Table 7: Annual prevalence of cocaine use, 2006 or latest year available

	No. of users	in % of population 15-64 years
EUROPE	4,008,000	0.73
West & Central Europe	3,895,000	1.22
South-East Europe	67,000	0.08
Eastern Europe	46,000	0.03
AMERICAS	10,196,000	1.74
North America	7,097,000	2.42
South America	3,099,000	1.05
ASIA	335,000	0.01
OCEANIA	301,000	1.37
AFRICA	1,147,000	0.22
GLOBAL	**15,987,000**	**0.37**

Above global average Below global average

Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

Fig. 65: Cocaine use trends* as perceived by experts: 1992-2006



* Note: Trends as reported by national experts in response to UNODC's Annual Reports Questionnaire. Points allocated for trend data: 'strong increase' 2; 'some increase': 1; stable: 0; 'some decline' -1; 'strong decline' -2. Reported drug use trends were weighted by the proportion of cocaine users in a country expressed as a %age of global cocaine use. If all countries had reported 'some increase', the global trend line would have increased by one point each year and would have reached 114 by 2006.
Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports and local studies.

cocaine use. South America (incl. the Caribbean and Central America: 1.1%) follows closely in third place. The change in this ranking is due to the results of a new household survey conducted in Australia in 2007. This survey found that cocaine use had grown significantly over the 2004-2007 period (prevalence rates for other drugs were found to have declined). Africa (0.2%), East and South-East Europe (0.1%) and Asia (0.01%) all have rates of annual prevalence below the global average.

Estimates of global annual prevalence should be interpreted with caution

The global prevalence rate of cocaine use (0.37%) estimated for 2006/07 is higher than the one reported in last year's World Drug Report (0.34%). For many reasons however, the difference is not statistically significant and most of the difference can be linked to methodological improvements bringing previous estimates closer to reality, *inter* alia by replacing some older, unrealistically low estimates, with higher new estimates based on local studies. If only data officially reported by States Members had been considered for this estimation, global cocaine use would have remained stable.

Trend estimates, based on expert perceptions provided to UNODC (weighted by the number of cocaine users in each country), also suggest that global cocaine use remained basically stable in 2006. These trend data suggest, in addition, that global cocaine use is slightly lower than in 2003. While one should not over-interpret these data, it seems safe to state that, according to expert opinion, the strong increases in global cocaine use seen in the 1990s have given way to a general stabilization over the 2003-2006 period.

Global stabilisation led by declines in North America

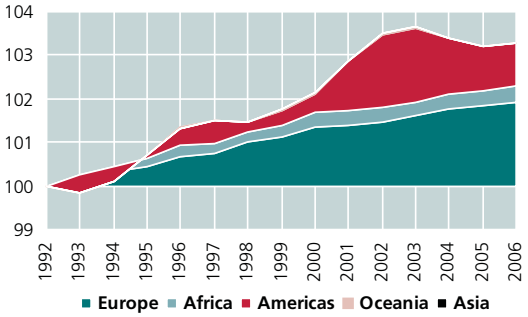
The global stabilization over the last few years was due to a contraction in cocaine use in North America, offsetting increases in South America, Western Europe and West and Southern Africa. While cocaine use was reported to have fallen in the USA and in Canada, it increased in most countries of South America and Central America. In the Caribbean region, use seems to be stable to declining, consistent with reports of a declining importance of this sub-region for shipments of cocaine to North America. While, in 2001, nine Caribbean countries reported rising levels of cocaine use and only three countries saw a stabilization, in 2006 the number of countries reporting increasing cocaine consumption fell to two. In contrast, the number of Caribbean countries reporting stable or declining levels of cocaine use increased to five.

Cocaine use in the Oceania region was reported as largely stable in 2006. However, the new household survey conducted in Australia in 2007 indicated a reversal of this trend, showing a statically significant increase in cocaine use over the 2004-07 period.

Cocaine use in Europe continues to increase but could be headed for stabilization

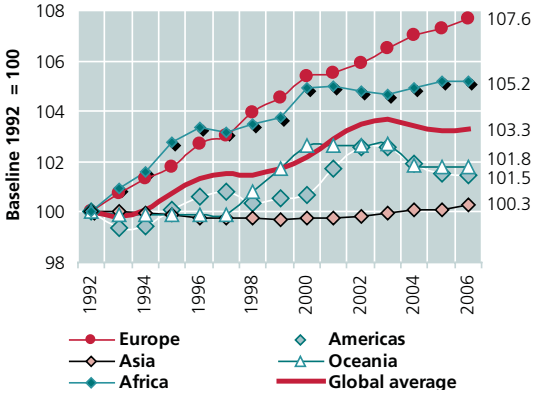
Most of the global increase of cocaine use over the last decade can be attributed to rapidly rising cocaine consumption in Europe, and cocaine use continued to increase in 2006. Nonetheless, data also indicate an underlying trend towards stabilization in a growing number of European countries. While the number of European countries reporting increases in cocaine use fell from 18 in 2001 and in 2002 to 14 in 2005 and in 2006, the number of European countries reporting stabilizing or declining cocaine use increased from 17 in 2001 to 28 in 2005 and 37 in 2006. The latter figure is more than 2.5 times the number of countries showing increases.

Fig. 66: Cocaine use trends as perceived by experts: regional contribution to global change, 1992-2006



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports and local studies.

Fig. 67: Cocaine use trends as perceived by experts - changes in regions, 1992-2006



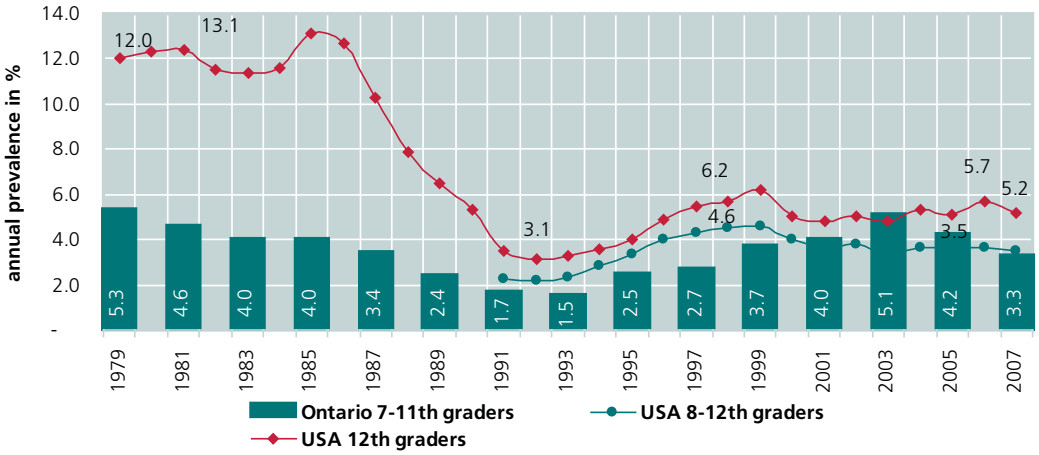
Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports and local studies.

Cocaine use in Africa increases

There was an increase of cocaine use in Africa. While, in 2001/02, 11 African countries reported rising levels of cocaine use, this number increased to 14 over the 2005/06 period; in parallel, the number of African countries reporting falling levels of cocaine use fell from 7 to 2. The increase was particularly noticeable in western and southern Africa, and along the Atlantic coast of North Africa. This is related to the increasing importance of Africa as a transhipment location for South American cocaine destined for Europe.

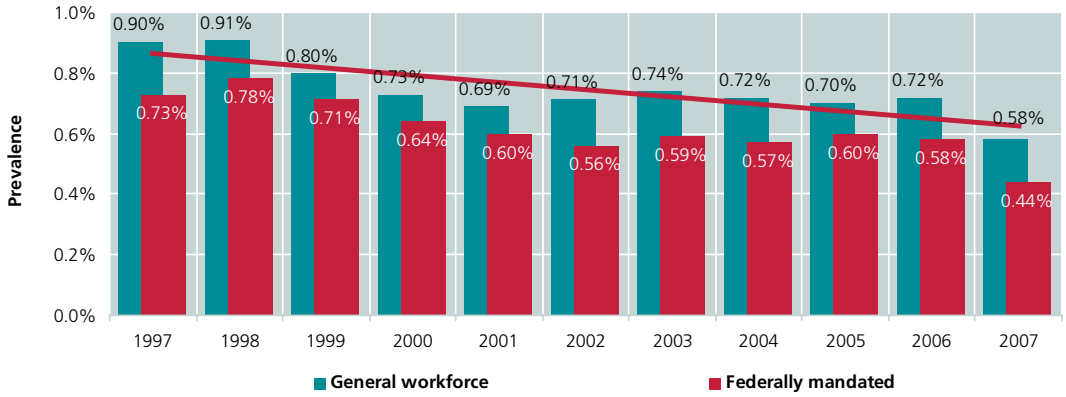
Cocaine use in Asia increased as well, although it continues to occur in only a very small portion of the general population. West African groups and, to a lesser extent, South American groups, are often involved in the trafficking of cocaine to the various Asian countries. The increase in cocaine use could reflect the rising levels of affluence in the region. In 2005, four Asian countries reported rising levels of cocaine consumption. This number rose to eight in 2006 and included Hong Kong SAR of China, Japan, the Philippines (for cocaine powder), Thailand, as well as Bangladesh, Nepal, Pakistan and the Lebanon. In parallel, the number of Asian countries reporting falling levels of cocaine use fell from three to two.

Fig. 68: Cocaine use among high-school students in the USA and Ontario, Canada, 1979-2007



Sources: NIDA, *Monitoring the Future*, 2007 and CAMH, *Ontario Drug Use Survey 2007*

Fig. 69: US national workforce*: percentage testing positive for cocaine



* Results based on 6.6 million tests among the general workforce in 2007 and 1.8 million tests among the federally mandated, safety sensitive workforce.
Source: Quest Diagnostics, *Quest Diagnostics Drug Testing Index*, March 2008

Surveys and expert perceptions both point to declines in cocaine use in North America

Indications of a decline in cocaine use are found in student surveys from Canada and the United States, admission to drug treatment reports and data from US drug testing.

The annual prevalence of cocaine use among 12th graders declined from 5.7% in 2006 to 5.2% in 2007, and was 60% lower than the peak found in 1985 (13.1%). Average annual prevalence of cocaine use among 8th-12th graders fell by more than 20% (from 4.6% to 3.5%) between 1999 and 2007. The use of crack-cocaine, which is responsible for a large part of problem drug use in the USA, also declined. Similarly, cocaine use among high-school students in Ontario – Canada's most populated province – fell by 35% between 2003 and 2007.

The number of cocaine related treatment admissions fell in the USA from 263,300 admissions in 2004 to 250,100 in 2006 according to the Treatment Episode Data Set (TEDS). Even more impressive have been the declines of positive drug tests among the US workforce in recent years, notably in 2007. The population testing positive for cocaine use fell from 0.91% in 1998 to 0.72% in 2006, and then to just 0.58% of the general US workforce in 2007. This is equivalent to a decline of 19% in 2007 and 36% since 1998. For federally mandated tests in safety-sensitive professions, the decline was more pronounced, amounting to 24% in 2007 and 44% since 1998. The decline in 2007 seems to have been related to strong price increases (more than 40%), following successful law enforcement operations against drug trafficking organisations, led by Mexico, the United States and Canada.

Prevention appears to have played less of a role in the 2007 decline. Survey data show that the perceived 'harmfulness' of cocaine use among high-school students did not increase in 2007. US high school student reports on the perceived cocaine availability showed a decline in 2007 and a marked reduction over the 1998-2007 period. The perceived availability of cocaine was also reported to have declined among high-school students in Ontario, Canada in recent years.

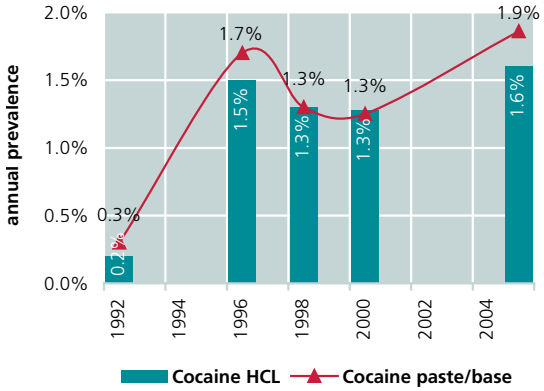
Levels of use rise in Latin America

In contrast to falling cocaine use levels in North America, most of the countries in Latin America report rising levels of cocaine use.

Cocaine use in Bolivia increased over the 2000-2005 period, from 1.3% to 1.9% of the population age 12-50. The improvements in the second half of the 1990s coincided with the decline of domestic coca leaf production, and the increase in the first years of the new millennium also coincided with a rise in cultivation and cocaine production.

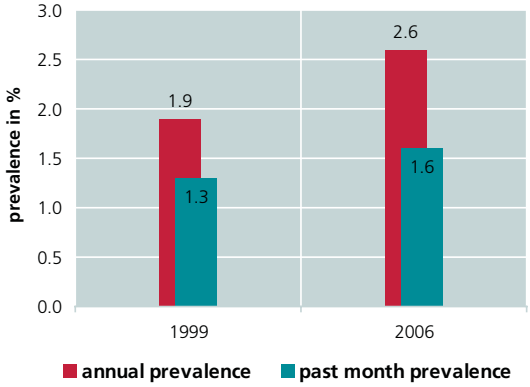
Cocaine use also increased in Brazil, the second largest cocaine market (some 870,000 persons) in the Americas after the USA (some 6 million persons). Household surveys conducted in Brazil showed an increase from 0.4% of the population age 12-65 in 2001 to 0.7% in 2005. Reports of increasing activities of cocaine trafficking groups in the south-eastern states of the country indicated that there may be a greater availability of cocaine in those areas. The territory of Brazil is increasingly exploited by international organized crime groups looking for transit points for cocaine shipments from Colombia, Bolivia and Peru to Europe. This is likely to have brought more cocaine to the local market.

Fig. 70: Bolivia: annual prevalence of cocaine use (age 12-50), 1992-2005



Source: CELIN, *Investigacion: Estudio Comparative Consumo de Alcohol, Tabaco, Cocaina, y otras Drogas en Bolivia*, 1992-1996-1998-2000-2005, Bolivia 2005.

Fig. 72: Argentina: cocaine use among the population age 12-65, 1999-2006



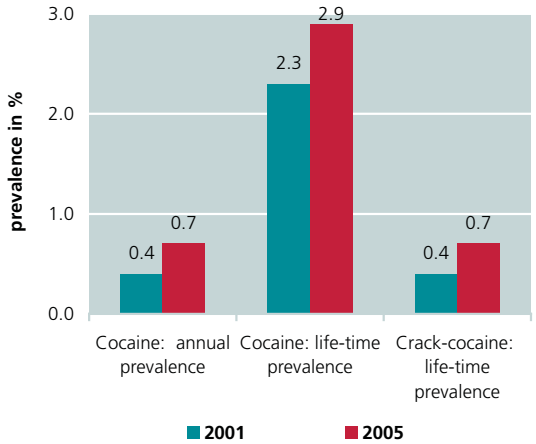
Sources: SEDRONAR, *Estudio Nacional en Población General sobre Consumo de Sustancias Psicoactivas 2006*, Buenos Aires 2007 and previous years.

The South-East and the South of Brazil are the areas most heavily affected by cocaine consumption. Life-time prevalence of cocaine use in the South-East of Brazil is 3.7% of the population age 12-65. In the South, life time prevalence is 3.1%, while in the North-East and the North life-time prevalence reaches at 1.2% and 1.3% respectively.

Argentina is the second largest cocaine market in South America (approximately 640,000 persons in 2006). In relative terms, the results of the 2006 household survey suggest that Argentina has the highest annual prevalence rate of cocaine use (2.6% of the population age 12-65) in South America and the second highest in the Americas after the USA (3% in 2006 among the population age 15-64). Over the 1999-2006 period, the annual prevalence rate rose from 1.9% to 2.6%. In addition, 0.5% of the population age 12-65 admitted to have used 'pasta base' (coca paste) in 2006.

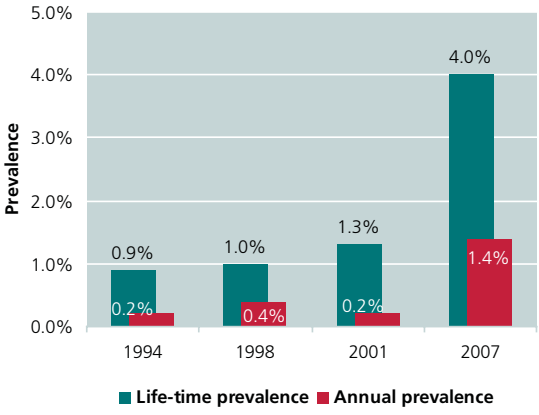
Increases in cocaine use were also reported from Uruguay. The annual prevalence of cocaine use among the population age 12-64 increased from 0.2% in 2001 to 1.4% of the population age 12-65 in 2007 (about

Fig. 71: Brazil: annual prevalence of cocaine use in 2001 and 2005



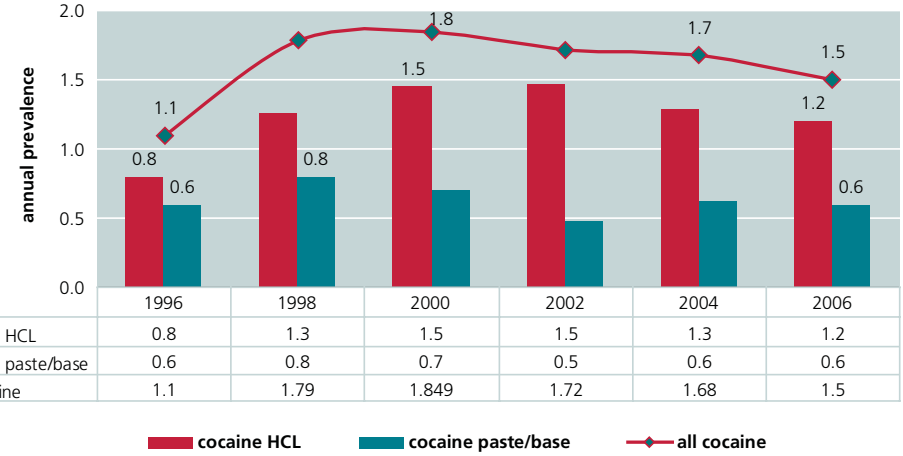
Source: CEBRID, *II Levantamento Domiciliar sobre o Uso de Drogas Psicotrópicas no Basil: Estudo Envolvendo as 108 Maiores Cidades do Pais*, 2005, Sao Paolo 2006 and CEBRID, *II Levantamento Domiciliar sobre o Use de Drogas Psicotrópicas no Basil: Estudo Envolvendo as 107 Maiores Cidades do País*, Sao Paolo 2002.

Fig. 73: Uruguay: cocaine use among the population age 12-65*, 1994-2007



* Age group 15-65 for survey in 1994; age group 12-64 in 1998 and in 2001; and age group 12-65 in 2007.
Sources: Observatorio Uruguay de Drogas (OUD), *Encuesta Nacional en Hogares sobre Consumo de Drogas 2007* and Secretaria Nacional de Drogas y Junta Nacional de Drogas, *Encuesta Nacional de Prevalencia del Consumo de Drogas 2001*.

Fig. 74: Chile: cocaine use among the general population, age 12-64, 1996-2006



	1996	1998	2000	2002	2004	2006
cocaine HCL	0.8	1.3	1.5	1.5	1.3	1.2
cocaine paste/base	0.6	0.8	0.7	0.5	0.6	0.6
all cocaine	1.1	1.79	1.849	1.72	1.68	1.5

Source: CONACE, *Séptimo Estudio Nacional de Drogas en Población General de Chile, 2006*, Santiago de Chile 2007.

30,000 people). In addition, consumption of coca paste ('pasta base') has increased from previously negligible levels as of 2002 and now affects 0.3% of the population. School surveys suggests that cocaine use also increased in Ecuador and Paraguay in recent years.

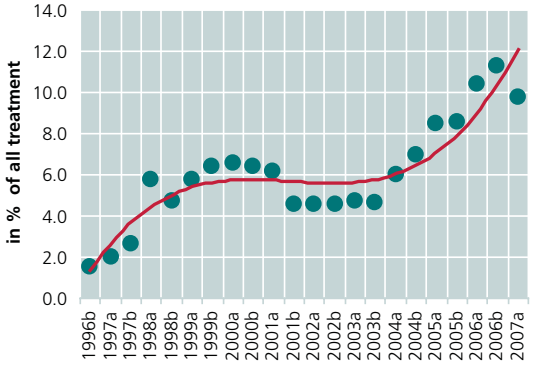
The only documented exception of the general upward trend in cocaine use in Latin America is Chile. Cocaine use in Chile increased strongly in the late 1990s but gradually declined after 2000. The annual prevalence rate of cocaine use fell from 1.8% of the general population age 12-64 in 2000 to 1.7% in 2004 and 1.5% in 2006 (about 170,000 persons).

Cocaine use continues to expand in South Africa

The increasing use of African countries as transshipment locations of cocaine from South America to Europe has had a negative impact on cocaine consumption. Increases in cocaine use have been reported throughout the continent, but are particularly significant in countries of western and southern Africa.

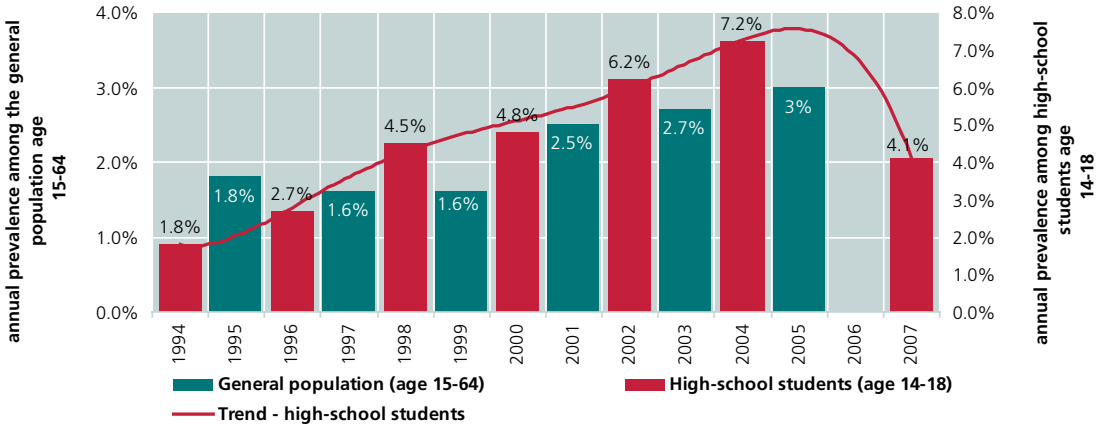
The best documented increase of cocaine use is found in South Africa where the South African Community Epidemiology Network on Drug Use (SACENDU) has been collecting data for the last decade. Data from treatment centers in six locations - Cape Town, Gauteng (which includes the capital Pretoria and Johannesburg), Durban, Port Elisabeth, East London and Mpulanga (the province bordering Swaziland and Mozambique), show that cocaine use has been increasing rapidly in recent years. Cocaine (and/or crack-cocaine) related treatment demand - expressed as an unweighted average of the proportions of patients found in treatment for cocaine abuse in the six sites mentioned above - rose from less than 2 % in 1996 to 6.5% in 2000. In the first two quarters of 2007, around 10 % of all treatment demand, including alcohol, was due to cocaine and/or crack-cocaine use. Excluding alcohol, the (unweighted) proportion would have amounted to some 18%, much higher than the African average (10%). The two exceptions to the increase in cocaine related treatment demand in South Africa over the first two quarters of 2007 were the Western Cape province (Cape Town), where methamphetamine predominates, and the Eastern Cape where treatment related to alcohol problems predominates. The highest proportions of treatment related to cocaine and/or crack-cocaine abuse over the first two quarters of 2007 were reported from the Eastern Cape province, which also includes the towns of Port Elisabeth and East London (14% of all treatment including alcohol), followed by the province of Gauteng that includes Johannesburg and the capital Pretoria (13%).

Fig. 75: South Africa: cocaine as primary drug of abuse in treatment demand*, 1996-2007



* unweighted average of treatment (incl. alcohol) in 6 provinces.
Source: SACENDU, "Monitoring Alcohol & Drug Abuse Trends in South Africa, July 1996 – June 2007", *Research Brief*, Vol. 10 (2), 2007. Six monthly data.

Fig. 76: Annual prevalence of cocaine use in Spain among the general population and among high-school students, 1994-2007



Source: Ministerio de Sanidad y Consumo, *Plan Nacional Sobre Drogas*

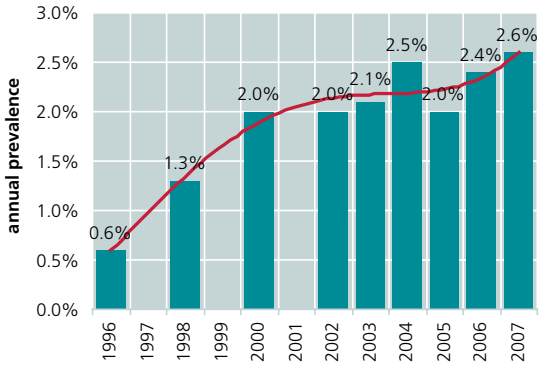
Cocaine use continues rising in Europe, amidst signs of stabilization in some areas

One of the most alarming trends in recent years has been the rapid increase of cocaine use in Europe. While use continued to rise in 2006, there are indications that the increase may be flattening. The number of European countries reporting increases in cocaine use fell from 18 in 2001 to 14 in 2006, while the number of European countries reporting stable or declining levels of cocaine use increased from 17 to 37 over this period. In a few European countries cocaine use appears to have started falling.

The highest prevalence rates for cocaine use in Europe are found in Spain, the main entry point of cocaine into Europe. Cocaine use doubled among the general population (age 15-64), from 1.6% in 1999 to 3.0% in 2005. Cocaine use levels in Spain are more than twice the West European average (1.2%), and similar to those reported from the USA. School surveys conducted in Spain over the November 2006-Feburary 2007 period suggest that the upward trend may be ending. Surveys of 14-18 year old high-school students found a marked decline in cocaine use: from 7.2% in 2004 to 4.1% in 2007. In parallel, the monthly prevalence rate of cocaine use among high-school students fell from 3.8% in 2004 to 2.3% in 2007. Spanish authorities linked this evolution to the intensification of both prevention and law enforcement efforts over the last few years. The perception of the risks associated with cocaine consumption increased markedly over the 2004-2007 period, while reported access to cocaine (perceptions of availability) deteriorated. The average age of initiation of cocaine use, however, did not increase. It fell slightly from 15.8 in 2004 to 15.4 in 2007.

Cocaine use in the United Kingdom, Europe's largest cocaine market in absolute terms and second largest in prevalence terms, continued to rise slightly. The annual prevalence rate of cocaine use in England & Wales increased from 2.4% of the population age 16-59 in 2005/06 to 2.6% in 2006/07. According to data collected as part of the British Crime survey, the annual prevalence rate of cocaine use is now more than four times higher than it was a decade earlier. Most of the increase took place in the 1990s when the annual prevalence of cocaine use grew from 0.3% in 1992 to 2% in 2000. The highest cocaine use levels in 2006/07 were reported from northern England and from London, and the lowest from Wales. Use of crack-cocaine remains limited (0.2%).

Fig. 77: England & Wales: annual prevalence of cocaine use among the general population (age 16-59), 1996-2007



Source: UK Home Office, British Crime Survey, 2006/07.

Fig. 78: Germany: annual prevalence of cocaine use among the general population, 1990-2006

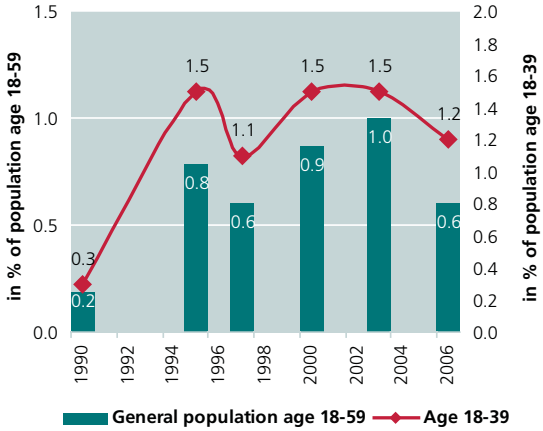
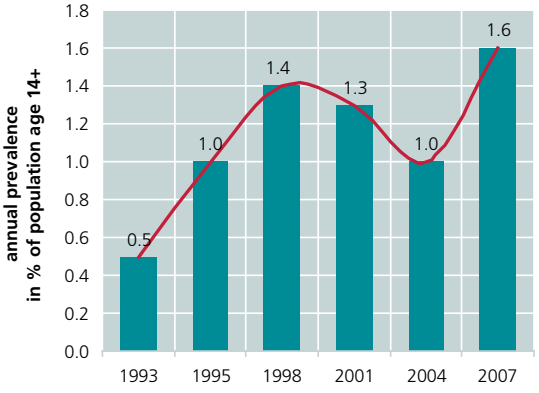


Fig. 79: Australia:annual prevalence of cocaine use among the population age 14 and above, 1993-2007



Source: Australian Institute of Health and Welfare, 2007 *National Drug StrategyHousehold Survey*, April 2008.

Data from Germany, the most populated country in the European Union, suggest that cocaine use declined over the 2003-2006 period. The annual prevalence of cocaine use among the population age 18-59 fell from 1% in 2003 to 0.6% in 2006, the lowest level since 1997. Use of crack-cocaine affects around 0.1% of the population age 18-59. Crack-cocaine use remains mainly limited to Hamburg and Frankfurt. Among the population age 18-39 the annual prevalence rate of cocaine use fell from 1.5% to 1.2% over the 2003-06 period, the lowest level since 1997. The number of newly identified (by the police) cocaine users fell by a further 10% in 2007, according to the Bundeskriminalamt (federal German police).

Prior to the release of the new household survey for 2006, Germany had reported stable cocaine use levels. The same applied to most neighbouring countries, including Austria, Switzerland, Belgium, the Netherlands, Denmark, Poland, the Czech Republic and other central European countries (Slovakia and Hungary). Increases in cocaine use in 2006 were however reported by a number of South-European countries, notably Portugal, Italy and some countries of the western Balkan, as well as France, the United Kingdom, Ireland and several Nordic countries.

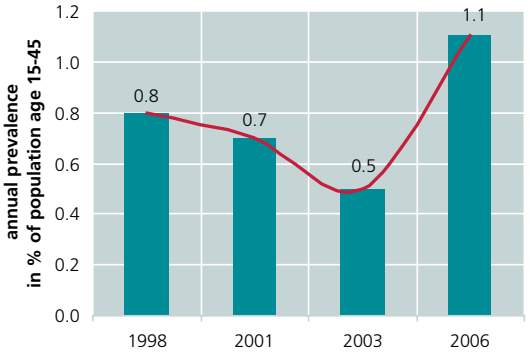
Cocaine use up in Oceania

In contrast to the decline of cocaine use in North America and the first signs of a flattening of the upward trend of cocaine use in Europe, cocaine use appears to be growing strongly in the Oceania region, notably in Australia and New Zealand.

Annual prevalence of cocaine use among the population age 14 and above grew in Australia from 1% in 2003 to 1.6% in 2006. The upward trend in cocaine use over the 2003-06 period was surprising insofar as drug use, in general, declined markedly over the same period in Australia. There is a possibility that the increasing difficulties of shipping cocaine to North America, in combination with the high prices of cocaine in Australia increased the attractiveness of Australia to drug traffickers. The existence of an established synthetic stimulants market may have also helped drug users to experiment with cocaine. The overall size of the cocaine market in Australia, however, remains limited compared to many other countries.

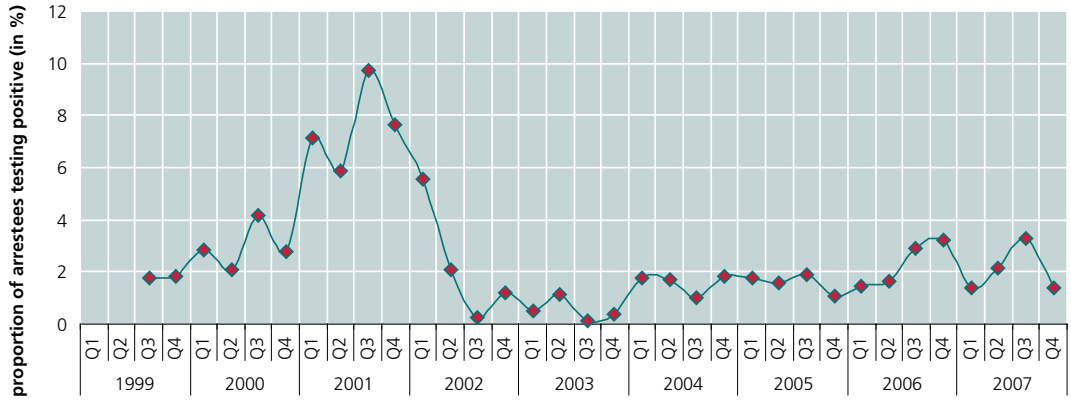
Similar trends can be found in New Zealand, where use declined over the 1998-2003 period, but more than doubled between 2003 and 2006. In both Australia and New Zealand, cocaine prevalence is now higher than in 1998.

Fig. 80: New Zealand: annual prevalence of cocaine use among the population age 15-45, 1998-2006



Source: Centre for Social and Health Outcomes Research and Evaluation, *Trends in drug use in the population in New Zealand: Findings from national household drug surveying in 1998, 2001, 2003 and 2006, Auckland 2007.*

Fig. 81: Proportion of arrestees testing positive for cocaine in Australia*, 1999-2007



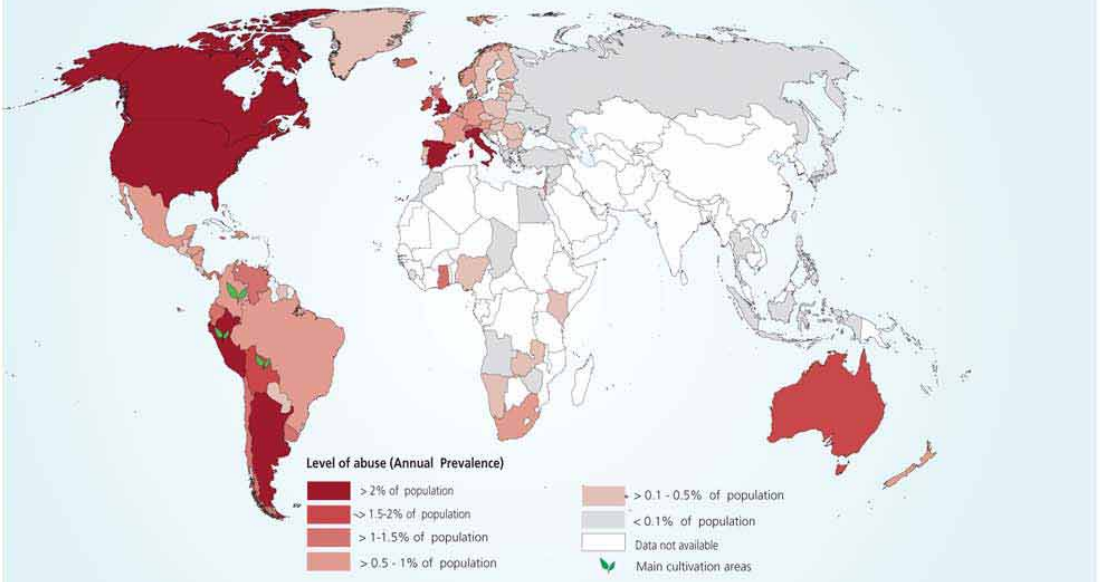
* unweighted average of the following sites: Bankstown, Parramata, Southport, Brisbane, Port Elizabeth, Adelaide and East Perth
Source: Australian Institute of Criminology, *Drug Use Monitoring in Australia* (DUMA), Canberra 2008.

Fig. 82: Proportion of arrestees testing positive for cocaine in Australia*, 1999-2007

* Results for New South Wales from Sydney (Parramatta and Bankstown); for Queensland from Brisbane and Southport; for South Australia from Adelaide and Elisabeth); for Western Australia from East Perth. Results for 'Australia': unweighted average of the proportions of the sites mentioned above.
Source: Australian Institute of Criminology, *Drug Use Monitoring in Australia* (DUMA), Canberra 2008.

The increase in cocaine use in Australia over the 2003-2006 period is also documented in 'DUMA' data (collected by the Australian Institute for Criminology for the ongoing Drug Use Monitoring in Australia project) on drug testing amongst arrestees. Cocaine use appears to be widespread in New South Wales but far less so in the rest of the country. DUMA data also suggest that cocaine use, in contrast to heroin and methamphetamine abuse, is still not frequent among criminals in Australia. Cocaine use levels in this group used to be higher a few years ago. In the third quarter of 2001, following Australia's 'heroin drought', close to 10% of those arrested consumed cocaine, far more than the 2% found in 2006 and 2007.

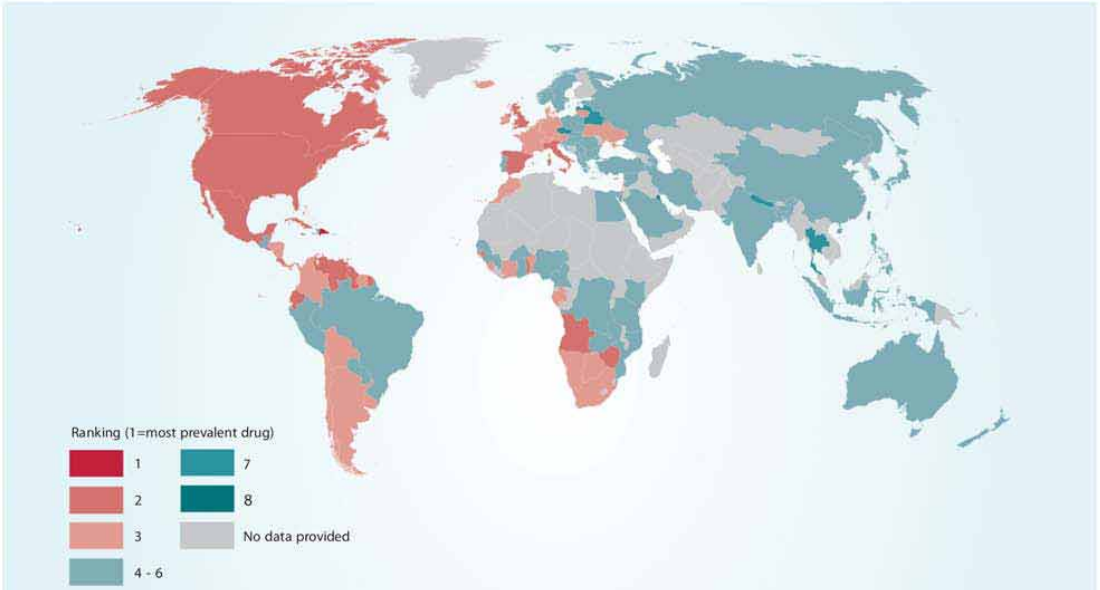
Map 12: Abuse of cocaine 2006 - 2007 (or latest year available)



Sources: UNODC Annual Reports Questionnaires data; Government Reports, US Department of State; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); Drug Abuse Information Network for Asia and the Pacific (DAINAP); UNODC Global Assessment Programme on Drug Abuse (GAP), Inter-American Drug Abuse Control Commission (CICAD).

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

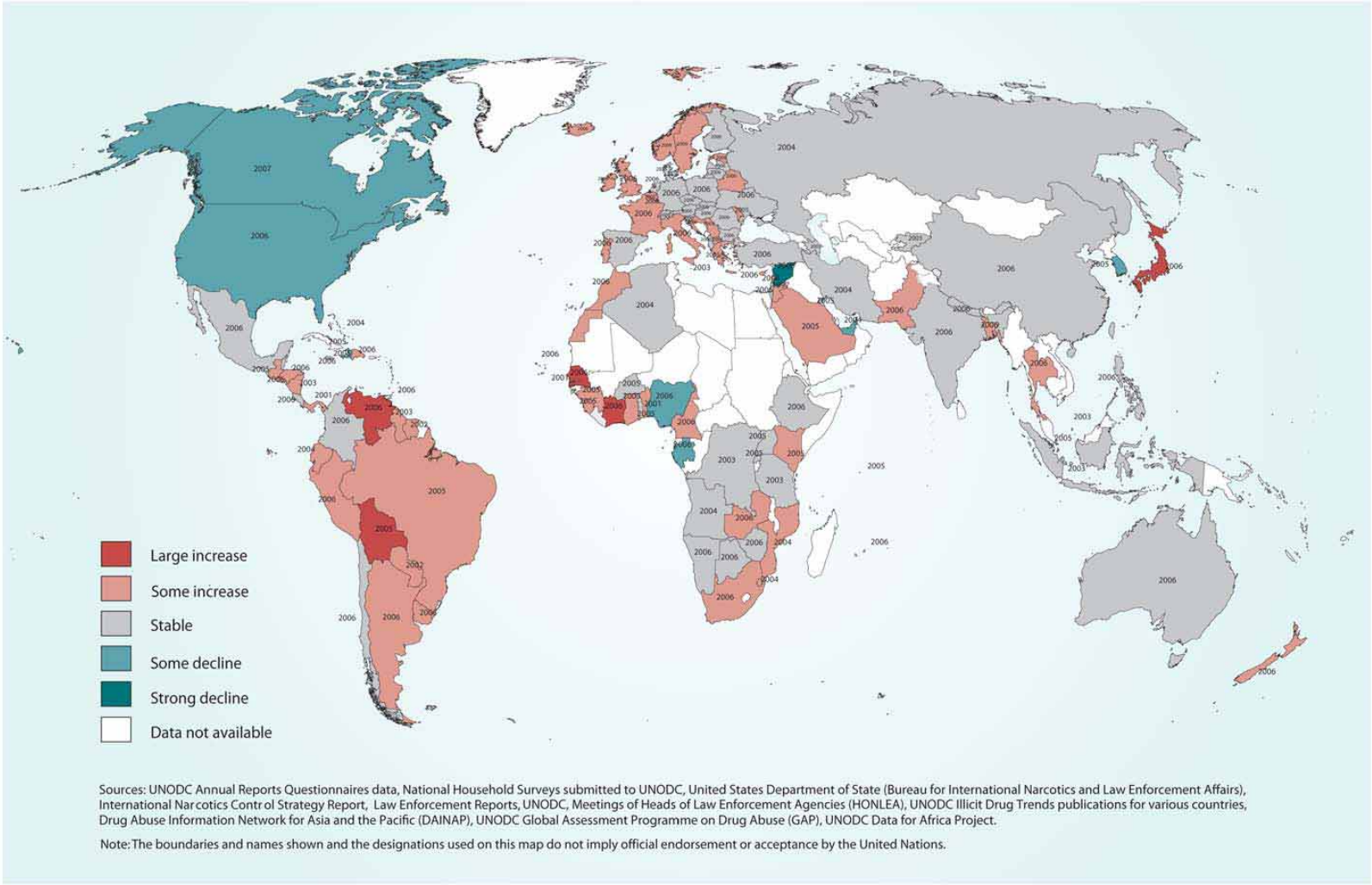
Map 13: Ranking of cocaine in order of prevalence, 2006



Source: UNODC Annual Reports Questionnaires data/DELTA; Government Reports, US Department of State; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); Drug Abuse Information Network for Asia and the Pacific (DAINAP); UNODC Global Assessment Programme on Drug Abuse (GAP); Inter-American Drug Abuse Control Commission (CICAD); UNODC Rapid Assessment Studies, Council of Europe, ESPAD.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 14: Canges in the use of cocaine, 2006 (or latest year available)



Sources: UNODC Annual Reports Questionnaires data, National Household Surveys submitted to UNODC, United States Department of State (Bureau for International Narcotics and Law Enforcement Affairs), International Narcotics Control Strategy Report, Law Enforcement Reports, UNODC, Meetings of Heads of Law Enforcement Agencies (HONLEA), UNODC Illicit Drug Trends publications for various countries, Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP), UNODC Data for Africa Project.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

1.4 Cannabis Market

1.4.1 Summary Trend Overview

The cannabis market has remained basically stable overall, but is experiencing some interesting developments. While estimates for cannabis herb production are problematic in nature – it is possible to make some broad statements about the level of production. In 2006 it is estimated that production, for both herb and resin, declined.

The changes in cannabis production themselves appear to be changing the market. First, the increase in cannabis herb potency seems to be going hand in hand with a decline in some of the main markets. This could mean that risk awareness amongst consumers is growing and contributing to some declines in demand. Declines in use have been noted in North America, West and Central Europe, and Oceania, all regions where high THC cannabis is cultivated hydroponically. Use continues to increase in Mexico, Central and South America, Africa and Asia.

Second, cannabis resin production in Afghanistan has been increasing since 2003, the same year resin production in Morocco began its current downward trend. In 2007 the area under cannabis cultivation in Afghanistan was equivalent to over a third of the area under opium poppy cultivation. While the country still receives less than ten percent of "source country mentions," and Morocco, which now produces only slightly more resin than Afghanistan, receives close to 20%, this will change if resin production continues to grow in Afghanistan. This could very well happen. There is thought to be vast over-supply of opiates, and prices could fall further any time, prompting a shift to cannabis cultivation. In addition, there is a functioning illicit drugs market in existence which may be able to accommodate another product efficiently.

These are areas of dynamism, but by and large the market retains its core characteristics year-on-year: it is the most widespread of all the illicit drug markets, it has, by far, the highest level of prevalence, and this prevalence in society tends to minimise perceptions of risk to health.

Cannabis is the biggest drug market by far and it is likely to be more organised than we think, especially in relation to hydroponically grown cannabis and distribution across large areas and borders. In contrast to other drugs, trafficking in cannabis herb continues to be mostly intra-regional. Exceptions to this rule remain cannabis herb exports from Africa (mainly western and southern Africa) to West and Central Europe and, to a lesser extent, from southern Africa to East Asia (e.g. Hong Kong SAR China) as well as from Central Asia to East Europe (notably the Russian Federation) and some cannabis herb exports from South America (mostly Colombia) to North America, mainly the USA. In 2006 the majority of cannabis herb seizures were reported from Mexico (36%), the United States (23%), and South Africa (7%). Most seizures of cannabis resin were made by Spain (45%), followed by Pakistan (11%), Morocco (9%), France (7%), Iran (6%), the UK (5%), and Afghanistan (4%).

If production truly takes hold in Afghanistan there could be a rebound in consumption in West and Central Europe and an expansion in Eastern Europe. These are already areas which import cannabis products. This rebound could be preference or price driven. Whatever the case, the market should be closely monitored for areas of vulnerability.

1.4.2 Production

Cannabis continues to be cultivated in most countries of the world

Cannabis[1] continues to dominate the world's illicit drug markets in terms of pervasiveness of cultivation, volume of production, and number of consumers. Cultivation and production of the drug is extremely widespread. Unfortunately some of the same qualities of this pervasiveness impede any practical and rigorous reckoning of production.

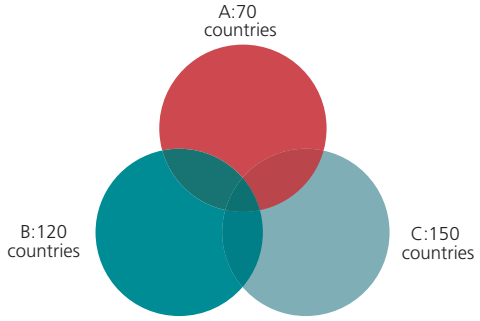
In the absence of direct measurements, UNODC relies heavily on the analysis of States Members responses to Annual Reports Questionnaires (ARQ). As part of this analysis, UNODC identifies three factors which indicate that the production of cannabis takes place: reports of domestic production in a States Members ARQ, "mentions" of the "source" or origin of a cannabis seizure in a country's ARQ, or, report of cannabis plant seizures.

Over the 1996-2006 period, 70, or just under half of all countries, provided UNODC with cannabis cultivation or production estimates. It is assumed that some cannabis cultivation takes place in the majority of the remainder as well, but that many countries simply lack the capacity to produce estimates on the extent. This assumption is partially corroborated by the fact that 127 countries were identified as the "source" or "origin" of trafficked cannabis over the 1996-2006 period. Further, assuming that it is impracticable to transport whole plants internationally and given that only some parts of the plant are useable as a drug, it is likely that when whole plants are seized they were locally produced. Seizures of whole cannabis plants were reported from 150 countries over the 1996-2006 period.

Combining these three indicative groups – cannabis production is identified in 172 countries and territories, equivalent to 90% of the countries and territories which receive UNODC's ARQ.

1 A discussion of the definitions of the three basic cannabis end products of cannabis herb, cannabis resin and cannabis plant, as well as preparations involving cannabis combinations, can be found on page 96 of the UNODC World Drug Report 2007 at www.unodc.org.

Fig. 83: Number of countries/territories identified as cannabis producers (1996-2006): N = 172



A: 70 countries/territories providing cultivation/production estimates
B: 127 countries/territories identified as source countries for cannabis that was trafficked
C: 150 countries reporting the seizure of whole cannabis plants

Of the cannabis produced, most is cannabis herb. The analysis of the reported source countries (ARQ, 2002-2006 period) suggests that cannabis resin production takes place in 65 countries while cannabis herb production occurs in 122 countries. [2]

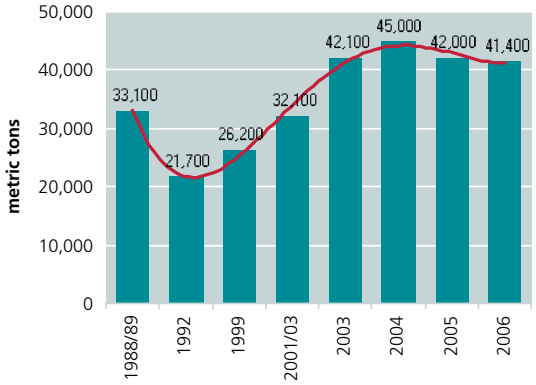
1.4.1.1 Cannabis herb production

Global production of cannabis herb is estimated to have stabilized at around 41,400 mt in 2006

Global cannabis herb production is estimated to have stabilized at 41,400 mt in 2006. Cannabis is produced in massively greater volumes than opium (6,600 mt in

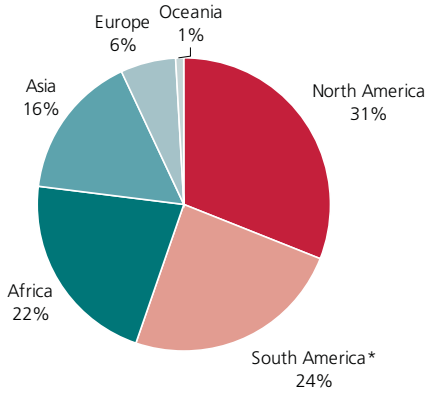
2 Production estimates for cannabis are systematically collected by UNODC from member states as part of the replies to the annual reports questionnaire (ARQ). However, the lack of clear geographical limitations of cannabis production has made it difficult, for most countries, to introduce scientifically reliable crop monitoring systems. The fact that cannabis is a plant that grows in virtually every inhabited region of the world, that it can be cultivated with little maintenance on small plots, and indoors, complicates matters further. Resulting variations in cannabis yields can also be large. The majority of current individual country estimates are based on expert opinion, rather than scientific monitoring systems. Nonetheless, the resulting global estimates should provide at least reasonable orders of magnitude of the problem. As the methodology used to arrive at the estimates has remained basically unchanged in recent years, changes in the global production estimates are likely to reflect underlying changes in cultivation and production. The fact that global cannabis production trends are more or less in line with global seizures trends, at least over longer periods, also seems to support this view.

Fig. 84: Tentative estimates of global cannabis herb production, 1988-2006



Sources: UNODC, Annual Reports Questionnaire Data and Govt. reports.

Fig. 85: Breakdown of global cannabis herb production in 2006 (N = 41,400 mt)



* South America, Central America and the Caribbean
Sources: UNODC, Annual Reports Questionnaire Data and Govt. reports.

2006) heroin (606 mt in 2006) or cocaine (984 mt in 2006) combined.

With production in 2006 almost equal to that of 2005, and 8% lower to that of 2004 it does appear that the upward trend observed from the early 1990s to the first years of the new millennium has come to a halt. In fact, the decline in global cannabis seizures between 2004 and 2006 was even more pronounced. Global cannabis plant seizures declined by 63% between 2004 and 2006 and global cannabis herb seizures fell by 31% from the peak in 2004 (while remaining largely unchanged as compared to 2005). The new cannabis herb estimate suggests that 13% of cannabis herb production was seized in 2006. The cannabis herb interception rate is lower than the rate for opiates (21% in 2006) or for cocaine (42%) due to the fact that, unlike the latter two drugs, cannabis herb is typically locally produced and consumed.

The area under cannabis cultivation is estimated to have amounted to some 520,000 ha (range: 470,000 - 600,000 ha) in 2006, far more than the area under poppy cultivation (201,500 ha) or the area under coca cultivation (157,000 ha). If all the cannabis growing wild was included in the area estimates, the global surface covered by cannabis could be two to three times larger.

Cannabis yields continue to vary widely, from 5 kg/ha to 40,000 kg/ha, reflecting ranges between wild cannabis and hydroponically grown cannabis. The median cannabis yield was 770 kg/ha; the (unweighted) average yield was 2,500 kg/ha. Yields in Mexico, one of the world's largest cannabis herb producing countries, were reported to have amounted to 1,200 kg per ha in 2006.[3]

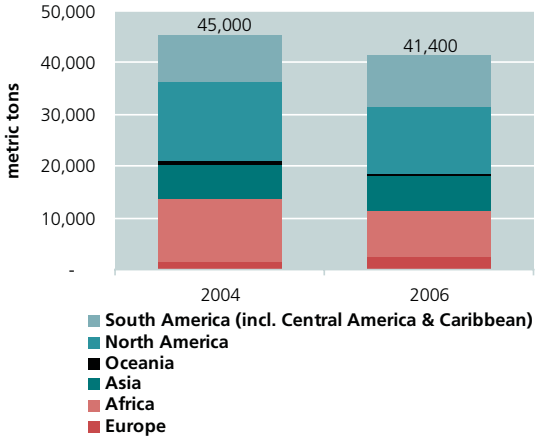
In 2006, most cannabis herb was produced in the Americas (55 %) and in Africa (22 %), followed by Asia and Europe. Countries producing for export remain limited to: a number of West, South and North African countries (including South Africa, Nigeria, Ghana and Morocco) and few East, West and Central Asian countries (including Afghanistan, Pakistan and Kazakhstan).

Cannabis herb production remains concentrated (≈12,900 mt) in North America, where the largest producers are Mexico followed by the United States of America and Canada. Production in Mexico (≈7,400 mt[4]) is mainly concentrated in states along the Pacific coast (Sinaloa, Miachoacán, Guerrero, Jalisco, Oaxana and Nayarit), were 60% of total cannabis eradication takes place. There is also cultivation in the Center/North region (Chihuahua and Durango), the site of 36% of eradication in 2006. Cannabis is produced throughout in the USA (≈4,700 mt; range: 2,800–6,600 mt), but it is particularly widespread in the western region (California, Washington, Oregon and Hawaii)

3 Typical yields for cultivated (as opposed to wild) outdoor cannabis ranged from 470 kg/ha in areas without irrigation to 5,000 kg/ha in well tended gardens, with figures around 2,000 kg/ha to be typical for the situation in the USA (as identified through the analysis of data from court cases), and levels around 1,000 kg/ha to be typical for the situation in developing countries. In contrast, hydroponically grown cannabis were found to reach typical yield levels from 15,000 to 30,000 kg per hectare. Source: UNODC, *World Drug Report 2006*, Vol. 1, pp. 193-195.

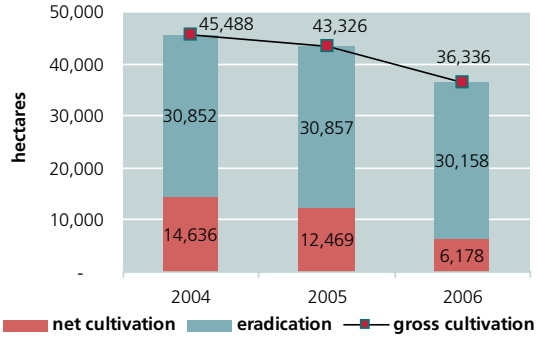
4 Gross cultivation was estimated at 36,336 ha. Eradication amounted to 30,158 ha - which is the world's largest eradication of cannabis. This left a net area under cannabis cultivation of 6,178 ha. The yield is estimated by the Mexican authorities to amount to 1,200 kg of cannabis herb per hectare. This results in a likely output of around 7,400 mt. (Source: Mexico's reply to UNODC's ARQ for the year 2006). US estimates saw the net area under cannabis cultivation in Mexico slightly higher, at 8,500 ha in 2006 which – based on higher yield assumptions – resulted in a production estimate of 15,500 mt of cannabis herb in 2006. (Source: US Department of State, Bureau of International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report* 2008, March 2008).

Fig. 86: Regional breakdown of global cannabis herb production, 2004 and 2006



Sources: UNODC, Annual Reports Questionnaire Data and Govt. reports

Fig. 87: Cannabis herb cultivation (in ha) in Mexico, 2004-2006



Sources: Organizacion de los Estados Americanos (OEA), Comisión Interamericana para el Control del Abuso de Drogas (CICAD), Mecanismo de Evaluación Multilateral (MEM), México, Evaluación del Progreso de Control de Drogas 2006-2006, and UNODC, Annual Reports Questionnaire (ARQ). 2006.

and in the Appalachian region (Kentucky and Tennessee). In 2006, the US eradicated 5,901,880 outdoor cannabis plants and 403,322 indoor cannabis plants.[5] Cannabis production in Canada is mainly concentrated in British Colombia and Quebec, followed by Ontario.

The largest proportion of cannabis herb production in South America (≈10,000 mt) takes place in Paraguay (≈ 5,900 mt), followed at lower levels by Colombia, Brazil (for the domestic market only), the Caribbean region (notably St. Vincent & the Grenadines and Jamaica) and Central America (notably Guatemala). In Africa (≈ 8,900 mt), where cannabis herb production takes place in almost every country, the largest producers include South Africa (≈ 2,500 mt) followed in the region by Malawi, Zambia and Swaziland. In addition, Nigeria, Ghana & several other West-African countries (including Guinea, Cote d'Ivoire, Benin and Togo), produce relatively large amounts, as does the Democratic Republic of the Congo, Tanzania, Egypt, and Morocco (which is mainly known as a cannabis resin producer).

Total production of cannabis herb in Asia is estimated at around 6,700 mt. This includes production in the Near East & South-West Asia region (Afghanistan, followed by the Lebanon and Pakistan), although in all of these countries cannabis herb production is far less important than the production of cannabis resin. Important producers in South-Asia are India, Nepal and Sri Lanka; and important producers in South & South-East Asia include Indonesia and Thailand. Among the largest cannabis producers in Europe (≈ 2,500 mt excl. Central Asia; ≈ 4,850 mt incl. Central Asia) are the C.I.S countries, notably Kazakhstan, Kyrgyzstan and the Russian Federation. The largest producers of herb in West and Central Europe are the Netherlands (22% of all European countries saw the Netherlands as their main source of cannabis herb in 2006) and Albania (7% of all European countries saw Albania as their main source country). European consumption still relies on cannabis imports. Australia is the largest cannabis herb producer in Oceania.

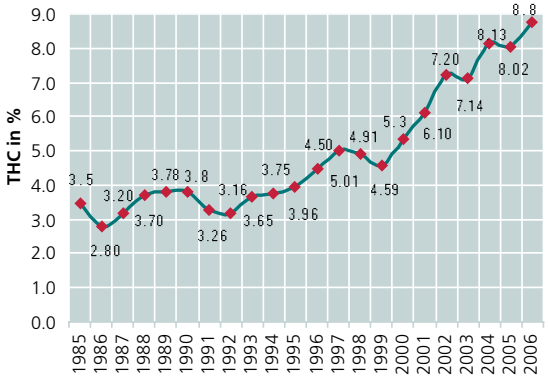
Changes in the regional breakdown between 2004 and 2006 suggest that cannabis production increased in Europe (offsetting some of the decline of cannabis resin exports, produced in Morocco), Asia and South America (including Central America and the Caribbean). Production appears to have declined in Africa from the peak in 2004 (though less dramatic than cannabis herb seizures which fell by 59% between 2004 and 2006 in Africa). Production also appears to have declined in North America. Official Mexican estimates show a decline in the net area under cannabis cultivation from 14,600 ha in 2004 to 6,200 ha in 2006, producing some 7,400 mt of cannabis herb.[6] Production estimates also declined in the USA. US estimates for the year 2002 suggested a net production of around 10,000 mt[7]

5 US Department of Justice, National Drug Intelligence Centre, Domestic Cannabis Cultivation Assessment 2007, Feb. 2007.

6 See Organizacion de los Estados Americanos (OEA), Comisión Interamericana para el Control del Abuso de Drogas (CICAD), *Mecanismo de Evaluación Multilateral (MEM), México, Evaluación del Progreso de Control de Drogas 2006-2006*, and UNODC, ARQ, 2006. US estimates, in contrast, saw a decline in the net area under cannabis cultivation in Mexico from 7,900 ha in 2002 to 5,600 in 2005, followed by an increase to 8,600 ha in 2007. (Source: US Department of State, Bureau of International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report 2008*, March 2008).

7 US estimates for the year 2002 suggested that domestic cannabis herb production ranged from 5,580 to 16,730 mt with a mid-range estimate of 11,150 mt. After deduction of eradication, this would have given a net production of close to 10,000 mt in 2002. (Drug Availability Steering Committee, Drug Availability Estimates in the United States, December 2002).

Fig. 88: Average cannabis potency (of seized material) in the USA



Source: The University of Mississippi Cannabis Potency Monitoring Project, quoted in US Department of Justice, National Drug Intelligence Center, National Drug Threat Assessment 2008.

Fig. 89: Area under cannabis cultivation in Morocco and Afghanistan*, 2003-2007

* data for Afghanistan refer to 2004/05, 2005/06 and 2006/07
Sources: UNODC, 2007 Afghanistan Opium Survey (and previous years) and UNODC/Government of Morocco, Maroc, Enquete sur le cannabis 2005, Jan. 2007.

while production in 2006 amounted to an estimated 4,700 mt[8].

The ongoing increase in THC levels of the cannabis produced is changing the market. In both Canada and the USA, where large-scale eradication efforts have been successful, the ongoing growth of the THC levels of the cannabis produced is worrying and likely reflects the ongoing shift towards indoor production of high-THC cannabis. The average THC levels of cannabis on the US market almost doubled between 1999 and 2006, from 4.6% to 8.8%.

1.4.1.2 Cannabis resin production

Morocco's importance as main source country for cannabis resin is declining

Available information suggests that Morocco is still the world's largest cannabis resin producer, supplying the illicit markets of Western Europe and North Africa. Its importance as a source country for cannabis resin has, however, declined in recent years.

The last cannabis survey conducted in Morocco was undertaken jointly by the Moroccan and UNODC. The 2005 survey reported the extent of cannabis cultivation at 76,400 ha, down from 134,000 ha in 2003.[9] In the absence of subsequent surveys, data from Morocco's main cannabis resin export markets suggest that the country's production of cannabis resin continues to decline. Cannabis resin seizures made in West and Central Europe fell by 17% on a year earlier in 2005 and by 29% in 2006. West & Central Europe accounted for 75% of global cannabis resin seizures in 2001. This proportion fell to 70% in 2005 and to 64% in 2006.

The decline of the importance of Morocco is also reflected in the number of countries citing Morocco as the "source" country or "origin" of the cannabis resin found on their markets. Over the 1999-2003[10] period 31% of countries reporting cited Morocco as the origin of the hashish found on their markets. Over the 2004-2006 period, 27% of reporting countries cited Morocco and the subsequent transit countries, Spain and Portugal, as the source country of the cannabis resin encountered on their domestic market. In 2006, Morocco mentions fell to 18%.

Afghanistan/Pakistan, accounted for 9% of such mentions. The extent of cannabis cultivation in Afghanistan is steadily approaching that of Morocco. (In 2007, the area under cannabis cultivation in Afghanistan was equivalent to 36% of the area under opium poppy cultivation). UNODC estimates suggest that the area under cannabis cultivation in Afghanistan increased from 30,000 ha in 2004/05 to 50,000 ha in 2005/06 and 70,000 ha in 2006/07. [11]

Nepal and India were mentioned by 8.5% of countries as the main source of cannabis resin on their markets, followed by the C.I.S. countries excluding Central Asia (6%). This includes mainly the Russian Federation, the Ukraine, the Republic of Moldova and Azerbaijan. Countries of Central Asia – mainly Kazakhstan, Kyr-

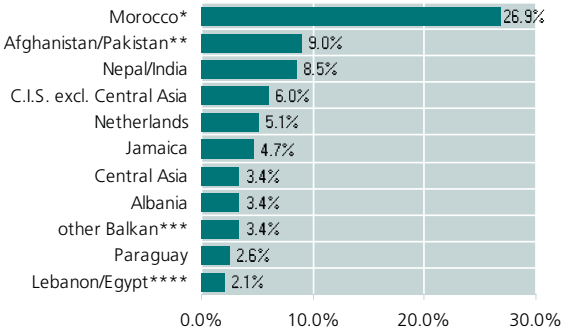
8 The 2006 gross estimates ranged from 5,650 to 9,420 mt in the United States with a mid-range estimate of 7,530 mt. Estimates of net production (after eradication) ranged from 2,830 to 6,590 mt, resulting in a mid-range estimate of 4,710 mt of cannabis herb production. (Department of Justice, National Drug Intelligence Center, Domestic Cannabis Cultivation Assessment 2007.)

9 UNODC, *Morocco Cannabis Survey 2005*, Executive Summary 2005, June 2005.

10 UNODC, *World Drug Report 2005*, Volume I.

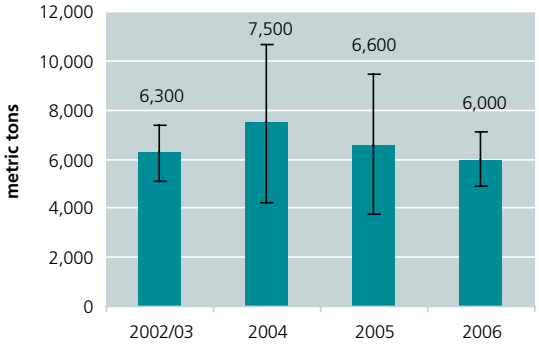
11 UNODC, *Afghanistan Opium Survey 2007*, October 2007.

Fig. 90: Main source countries of cannabis resin, 2004-2006 number of times countries were identified as source countries as a proportion of countries reporting



* incl. mentions of transit countries Spain and Portugal;
** incl. mentions of transit country Iran
*** Bosnia-Herzegovina, Serbia, Montenegro, Bulgaria;
**** including mentions of Syria
Source: UNODC, Annual Reports Questionnaire Data.

Fig. 91: Global cannabis resin production estimates, 2002/03-2006



Sources: UNODC and Govt. of Morocco, Cannabis Surveys 2003, 2004 and 2005, UNODC and Govt. of Afghanistan, Afghanistan Opium Survey 2007 (and previous years) and UNODC, Annual Reports Questionnaire Data.

gyzstan and Tajikistan - are cited by 3.5% of all countries as a source of resin on local markets. The main production area in Central Asia is the Chu valley in Kazakhstan (and neighbouring Kyrgyzstan) where cannabis - for both herb and resin production – grows on some 138,000 ha.[12] (Cannabis resin accounts for just 3% of all cannabis seizures in Central Asia).

While the Netherlands is mentioned as a country of origin (5% of global mentions), it is not clear to what extent the cannabis resin actually originates in the Netherlands and to what extent it is smuggled into the country (from Morocco and other countries) and then re-exported. Though the Netherlands is an important producer of cannabis herb, other available information suggests that resin production is still limited. The situation is similar in Albania which accounts for 3.5% of all mentions.

Overall production (and consumption) of cannabis resin in the Americas remains limited. The most important cannabis resin producer in the Americas continues to be Jamaica (5% of global mentions), followed by Paraguay (2.5%). The latter country is mainly known for cannabis herb production.

The most important cannabis resin producers in the Near East continue to be the Lebanon and Egypt (2 % of global mentions). Production in the Lebanon has drastically declined as compared to the early 1990s, following a number of successful eradication campaigns. As a result, cannabis resin from Morocco and from Afghanistan, in addition to locally cultivated cannabis, is now also trafficked to Egypt to cover local demand. Production of cannabis resin in the Lebanon continues to be mainly concentrated in the Bekaa valley. In 2007, Lebanese police reported an increase in the area under illicit cultivation to some 6,500 ha (including areas used for the illegal cultivation of opium poppy). Given problems in maintaining the annual crop eradication activities, only 2% of the hashish crop was reported to have been effectively eradicated.[13]

Global cannabis resin production estimated at around 6,000 mt

Tentative estimates, based on Morocco's and Afghanistan's cannabis resin production estimates, global herb production estimates and seizure statistics, suggest that 6,000 mt of cannabis resin were produced in 2006 (range: 4,900 to 7,100 mt). The previous year's estimate amounted to 6,600 mt (range: 3,800-9,500) and the estimate for 2004 to 7,500 mt (range: 4,200-10,700). These estimates suggest that global cannabis resin production – after many years of uninterrupted increases – may have declined over the 2004-2006 period. A production of some 6,000 mt of cannabis resin results in a calculated global cannabis resin interception rate of 17%. This is higher than the interception rate for cannabis herb (13%) but lower than the global interception rate for opiates (22%) or cocaine (42%).

12 US Department of State, Bureau of International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report 2008*, March 2008.

13 US Department of State, Bureau of International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report 2008*, March 2008.

Table 8: Tentative estimates of global cannabis resin production, 2006

	Seizures in mt (2006)	Estimated proportion of seizures related to cannabis resin originating in Morocco or Afghanistan	Potential seizures in mt related to Moroccan or Afghan cannabis resin production	Cannabis resin production estimates in mt
West & Central Europe	638	80%	510.2	
North Africa	119	90%	106.7	
Near and Middle East	217	50%	108.3	
Seizures related to Moroccan and Afghan cannabis resin			725.2	
Global seizures			1,024.8	
Cannabis resin production				
in Morocco (2004/05)				1,915
in Afghanistan (2006/07)				1,603
Sub-total				3,518
Proportion in total (based on seizures)				71%
(a) Estimate of global cannabis resin production				4,971
2. Estimate based on cannabis herb production estimates and 2006 seizures				
	Cannabis herb	Cannabis resin	Proportion	Cannabis resin production estimates in mt
Seizures in mt (2005)	4,958	1,025	17%	
(b) Estimate of global cannabis resin production	41,400		17%	7,092
3. Combined production estimate of cannabis resin				6,032
Combined production estimate of cannabis resin (rounded)				6,000

1.4.3 Trafficking

Seizures of both cannabis herb and resin declined over 2004-2006 period

Predictably, for such a vast illicit market: out of 170 countries and territories which reported seizures to UNODC in 2005 and 2006 more than 99% reported seizures of cannabis. Sixty five per cent of global seizures cases were cannabis related in 2006. Out of all reported global seizure cases (1.65 million) 32% were related to cannabis herb, 21% were related to cannabis resin, 11% were related to the seizures of cannabis plants and 0.4% to the seizure of cannabis oil.

Cannabis herb seizures amounted to some 5,290 metric mt in 2006; cannabis resin seizures amounted to around 1,000 metric mt. In addition, small quantities of cannabis oil were seized (1,700 litres). Both cannabis herb seizures (-27%) and cannabis resin seizures (- 30%) declined over the 2004-2006 period, reversing the previous upward trend.

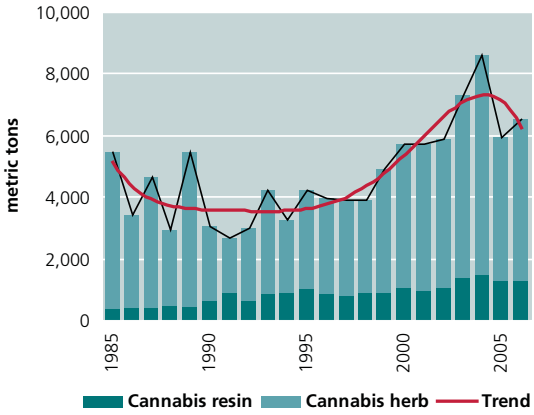
The majority of cannabis herb seizures in 2006 were reported from Mexico (36% of the world total), followed by the United States (23%), South Africa (7%), Malawi (5%), Tanzania (4%), Nigeria (4%), Brazil (3%) and India (3%). Most seizures of cannabis resin were made by Spain (45%), followed by Pakistan (11%), Morocco (9%), France (7%), Iran (6%), the UK (5%), Afghanistan (4%) and Canada (3%). Most cannabis oil seizures were made by Canada (62%), the Russian Federation (24%), and Jamaica (7%).

155 countries out of 170, or 91% of all countries that reported drug seizures to UNODC in 2005/06, reported the seizure of cannabis herb. In contrast to other drugs, trafficking in cannabis herb continues to be mostly intra-regional. Exceptions to this rule remain cannabis herb exports from Africa (mainly western and southern Africa) to West and Central Europe and, to a lesser extent, from southern Africa to East Asia (e.g. Hong Kong SAR, China) as well as from Central Asia to East Europe (notably the Russian Federation) and some cannabis herb exports from South America (mostly Colombia) to North America, mainly the USA.

Trafficking concentrated in North America and Africa

Once again close to 60 per cent of global cannabis herb seizures were made in North America (58%) in 2006,

Fig. 92: Cannabis seizures, 1985-2006



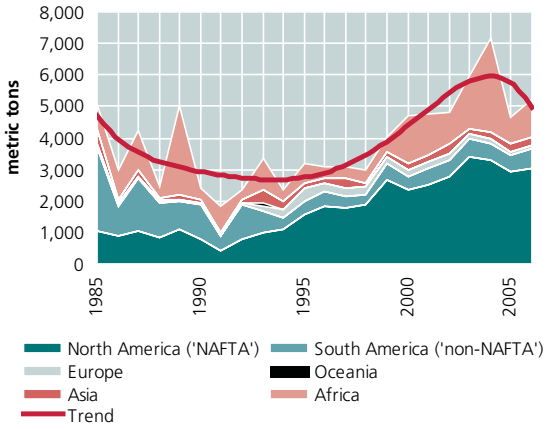
Source: UNODC, Annual Reports Questionnaire Data / DELTA

notably by the authorities of Mexico (1,893 mt), the United States (1,139 mt) and, Canada (13 mt). Seizures in North America remained basically stable in 2006 as compared to a year earlier but were 8% lower than in 2004. The illicit traffic in cannabis flows mainly from Mexico to the USA and, to a lesser extent, from Canada to the USA. Although much of the marijuana produced in Canada is intended for domestic consumption, cross-border smuggling by organized crime syndicates remains a concern. These groups typically market cannabis with very high THC levels. Law enforcement has identified a clear and growing preference for this over the last few years and there is a high frequency of seizures along the USA/Canada border.

Large cannabis herb seizures have also been made in Africa, which accounts for 23% of global seizures. The largest seizures in 2006 were reported by South Africa (359 mt), Malawi (272 mt) Tanzania (225 mt), Nigeria (192 mt) and Egypt (101 mt). While seizures reported from Africa increased year-on-year in 2006 (41%), they are significantly lower than they were in 2004 (- 59%).

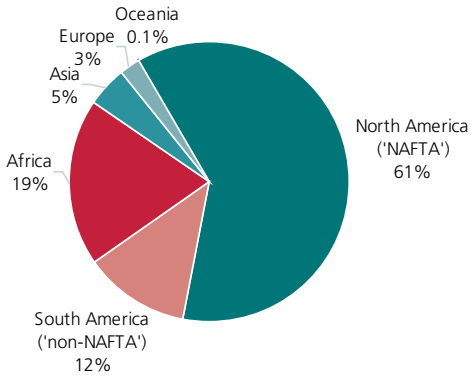
South America, including the Caribbean and Central America accounted for 12% of global cannabis herb seizures. The largest level of seizures in this region was reported by Brazil (167 mt), Bolivia (125 mt), Colombia (110 mt), Argentina (67 mt), Paraguay (59 mt) and

Fig. 93: Regional breakdown of cannabis herb seizures, 1985-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Fig. 94: Distribution of global cannabis herb seizures in 2006 (N=5230 metric mt)



Source: UNODC, Annual Reports Questionnaire Data / DELTA

Jamaica (37 mt). Most countries in South America, notably Brazil, Argentina, Uruguay and Chile cite Paraguay as the main source country for the cannabis resin found on their market. Seizures made by countries in South America showed a noticeable upward trend over the 2004-06 period (+24%). In contrast, seizures in the Caribbean and in Central America remained largely unchanged over the 2004-06 period.

The largest seizures made in Asia – which accounted for 4% of all seizures in 2006 - were reported by India (158 mt), followed by Kazakhstan (23 mt), Thailand (12 mt) and Indonesia (12 mt). Seizures increased by 10 % over the 2004-06 period and were 60% higher than in 1996. Cannabis herb seizures increased over the last decade in all sub-regions, except East and South-East Asia – reflecting a decline of cannabis cultivation in this part of the world.

European cannabis herb seizures - 2% of the world total – rebounded in 2006 and were 21% higher than a year earlier, though still 27% less than in 2004 and 53% lower than in 1996. The largest seizures were made by the Russian Federation (24 mt) and the UK (20 mt)[1]. Europe is the only region which also 'imports' significant amounts of cannabis from other regions. Oceania accounted for 0.1% of global cannabis herb seizures. Almost three quarters of all seizures in that region were reported by Australia.

1 No UK seizure data for the year 2006 are as yet available. Data for the UK refer to the year 2005.

Trafficking in cannabis resin

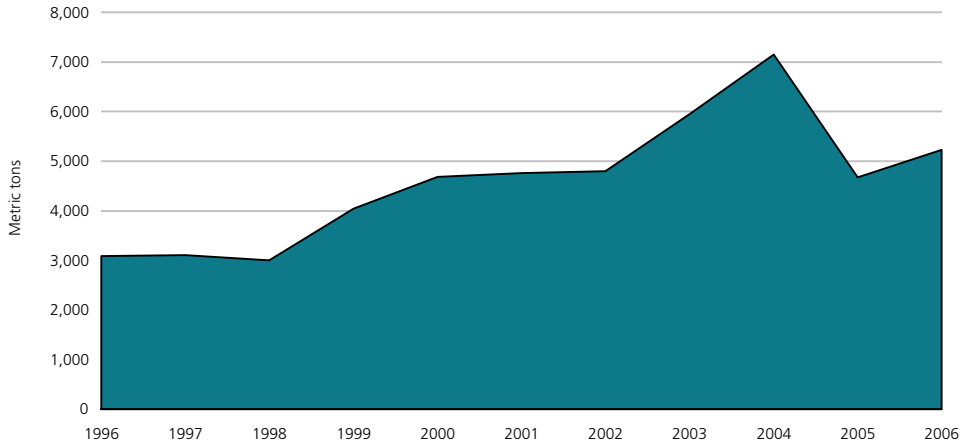
Seizures of cannabis resin[2] were reported in 115 countries over the 2005-06 period: 68% of all countries reporting seizures to UNODC. Cannabis resin is the second most widely trafficked illicit drug after cannabis herb, it accounted for 350,000 seizure cases or 21% of all seizures in 2006. One thousand mt of resin were seized in 2006.

Global cannabis resin seizures continue declining in West and Central Europe

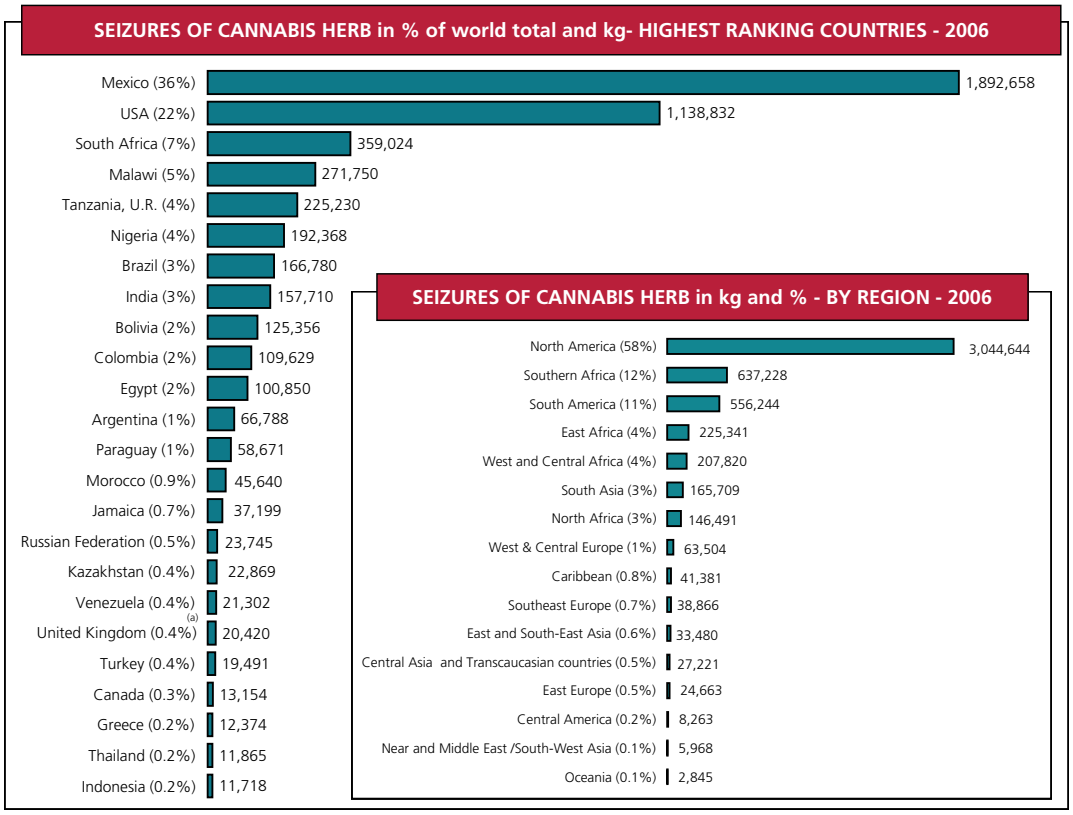
In 2006, global cannabis resin seizures declined by 20 % year on year and by 30% as compared to 2004. Most of the decline was due to a fall in the level of seizures reported by countries of West & Central Europe (-29% in 2006 and – 41% over the 2004-06 period). This was linked to the decline of cannabis resin production in Morocco in 2004 and 2005, and there were no indications of a 'revival' in 2006. Cannabis resin seizures reported by Spain fell by 31% between 2005 and 2006; by France -19%, by Italy -17% and seizures in the Netherlands fell by 62%. Cannabis resin seizures reported from Africa declined by 9%, including a 5% decline reported by Morocco.

2 In contrast to trafficking in cannabis herb, trafficking in cannabis resin is not only intra-regional but, to a significant degree, inter-regional, typically affecting neighbouring regions. This applies, in particular, to trafficking of cannabis resin from North Africa (Morocco) to West and Central Europe. Individual drug seizures reported to UNODC in 2005 and 2006 suggest that about three quarters of the cannabis resin seized in Europe originated in Morocco. Inter-regional trafficking can be also found for trafficking of cannabis resin from Central Asia to East Europe (notably the Russian Federation) and from the Caribbean (notably Jamaica) to North America (notably Canada) as well as from the Near and Middle East (via Pakistan) to North America (Canada).

Fig. 95: Global seizures of cannabis herb, 1996-2006

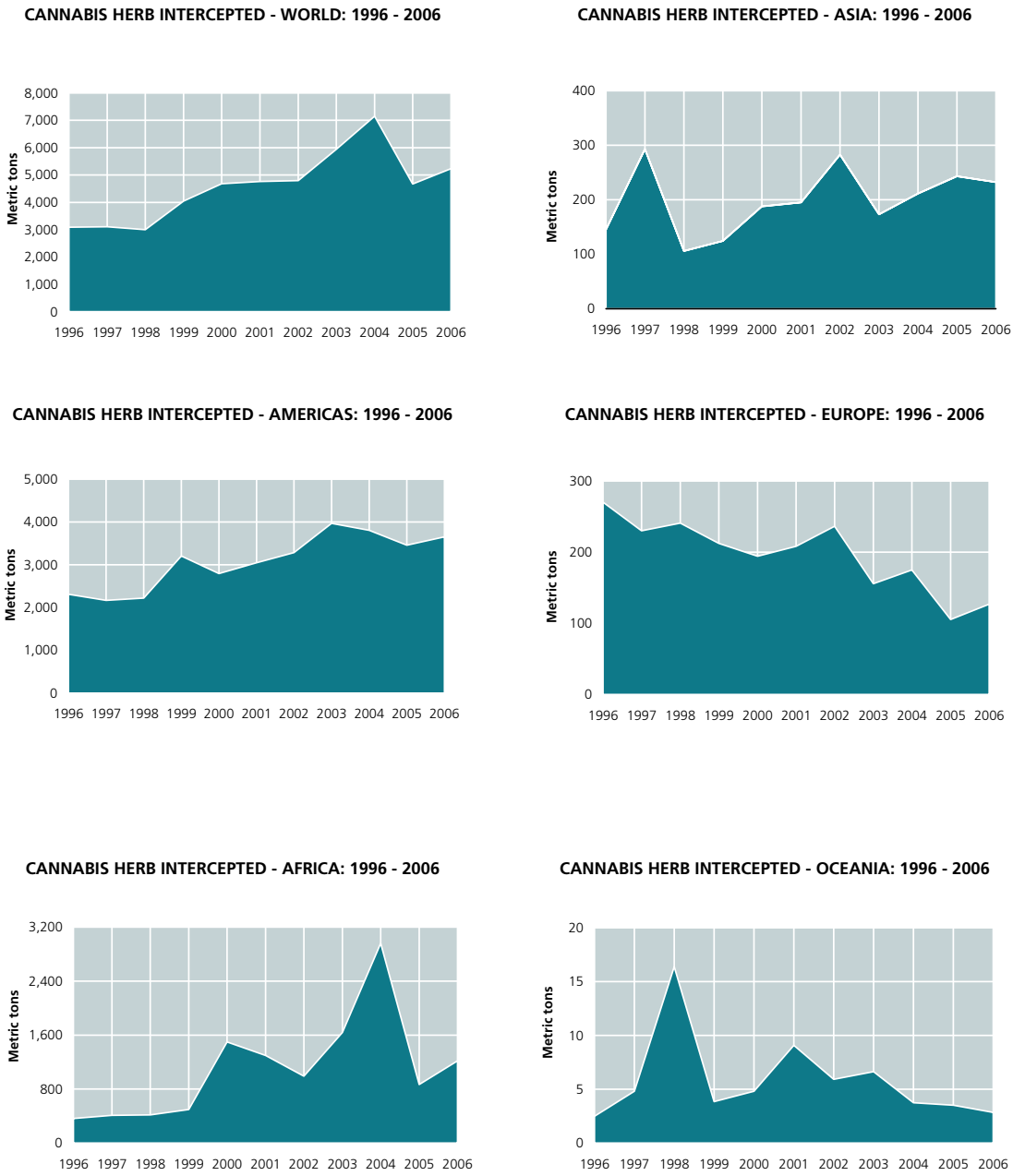


Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Metric tons	3,090	3,105	2,998	4,042	4,680	4,758	4,798	5,941	7,152	4,674	5,230

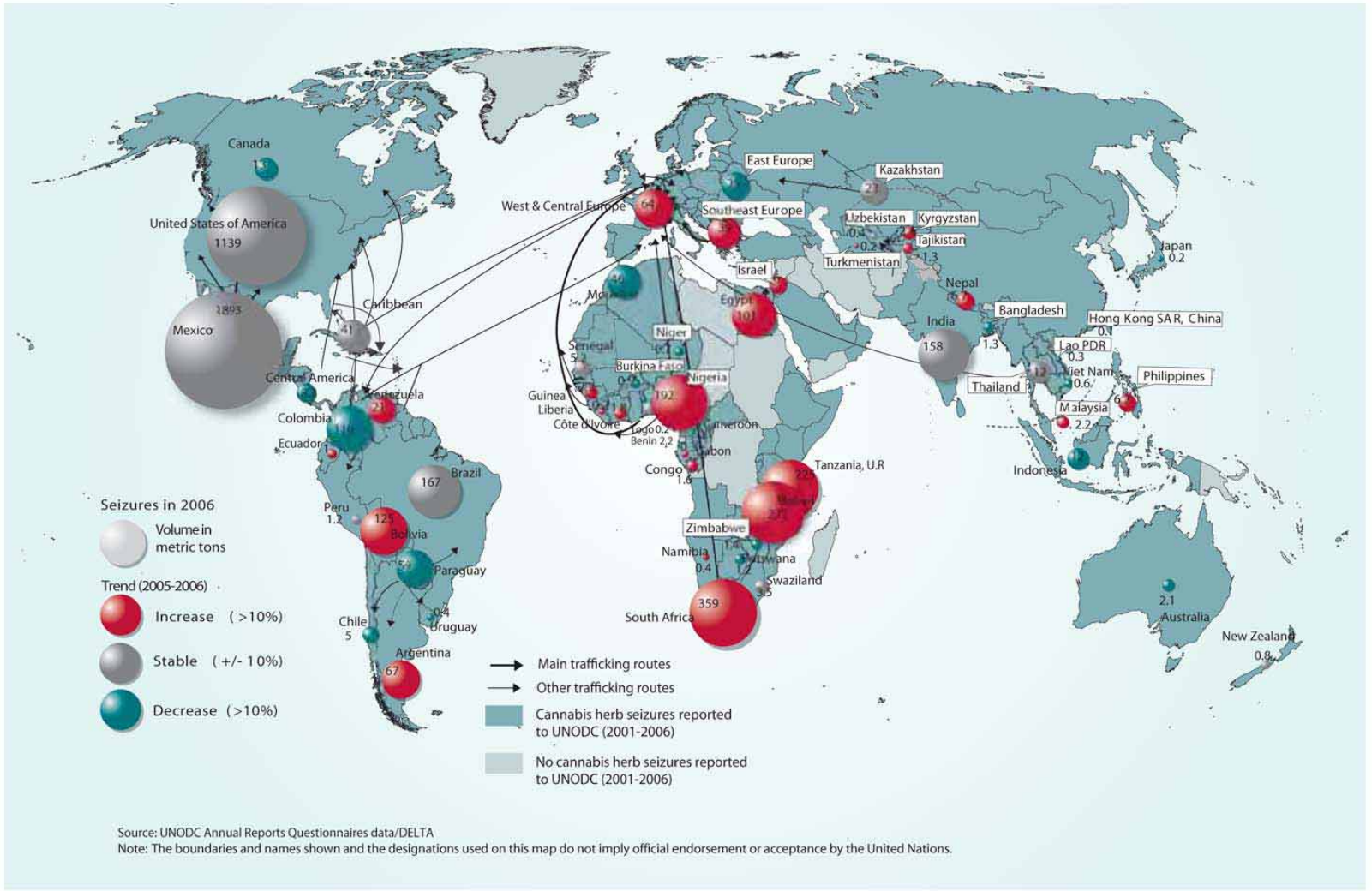


[a] Data refer to 2005 England and Wales only.

Fig. 96: Global seizures of cannabis herb, 1996-2006



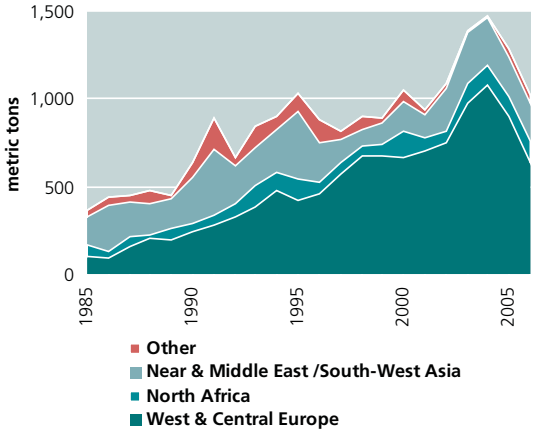
Map 15: Trafficking in cannabis herb, 2006 (countries reporting seizures of more than 100 kg)



Source: UNODC Annual Reports Questionnaires data/DELTA

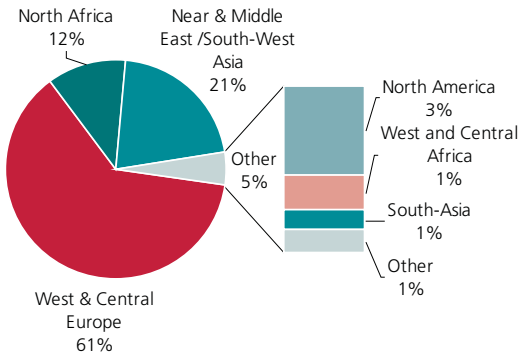
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Fig. 97: Global cannabis resin seizures, 1985-2006



Source: UNODC, Annual Reports Questionnaire Data/ DELTA.

Fig. 98: Global cannabis resin – regional distribution, 2006 (N = 1,025 metric mt)



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Afghanistan/Pakistan related trafficking appears to be increasing

More than a fifth of global cannabis resin seizures take place in South-West Asia. Growing production in Afghanistan is thought to have pushed up resin seizures in Pakistan, where they increased by 23% in 2006. Even stronger increases (more than 60-fold) were reported from North America (Canada). This was due to the interception of a few large cannabis resin shipments from (or via) Pakistan to Canada. North America accounts now for 3% of global cannabis resin seizures.

In addition, resin seizures more than doubled in South-Asia, mainly due to growing seizures reported by Nepal, the main cannabis resin producer in this sub-region. South-Asia accounts for 1% of global cannabis resin seizures.

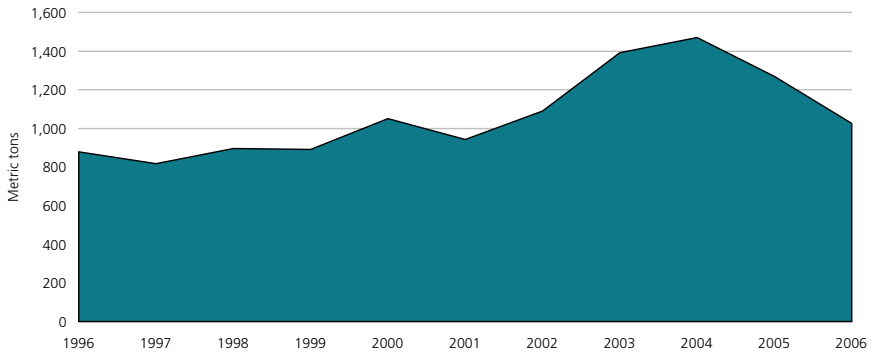
West and Central Europe remains the main destination of cannabis resin

West and Central Europe, where 62% of global resin seizures took place in 2006, remained the world's largest cannabis resin market. Spain accounted for 45% of global seizures, ahead of France (7%), the UK (5%), Italy (2%), Belgium (1.4%) and Portugal (0.8%). Spain, located along the main trafficking route from Morocco towards Europe, continued to play a key role in limiting the supply of cannabis resin for the European market. Europe as a whole accounted for 63% of global resin seizures.

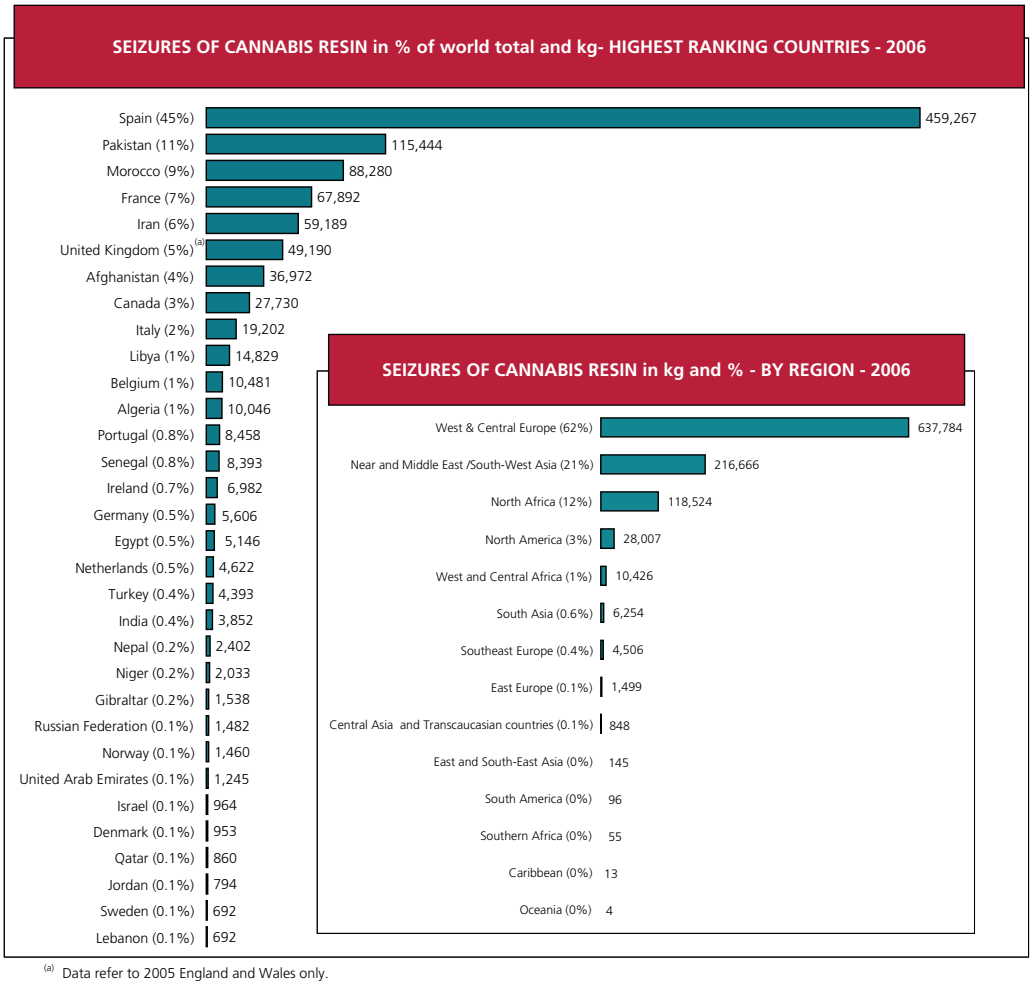
Seizures in South-West Asia accounted for 21% of the world total in 2006, up from 18% in 2005. The largest seizures were reported by Pakistan (11%), followed by Iran (6%) and Afghanistan (5%). Shipments of Afghan cannabis resin have been increasingly identified in the Near East, partially replacing cannabis resin exports from the Lebanon. In addition, shipments of cannabis resin via Pakistan to Senegal were reported, probably intended for onward shipment to Europe. Shipments of cannabis resin were seized in several countries along the coast of Africa for final destination in Canada.

Countries of North Africa seized 12% of global resin seizures in 2006. The largest seizures were reported by Morocco (9% of global cannabis resin seizures). The prime destination remains Western Europe. However, markets in the region are also developing. Despite the declines in cannabis production in Morocco, seizures in the other North African countries rose in 2006, reflecting growing shipments of cannabis resin from Morocco towards Egypt and other countries in North Africa. Nascent sub-Saharan routes (which include Mauritania, Mali, Niger and Chad), potentially related to these new markets, are also thought to be developing.

Fig. 99: Global seizures of cannabis resin, 1996-2006



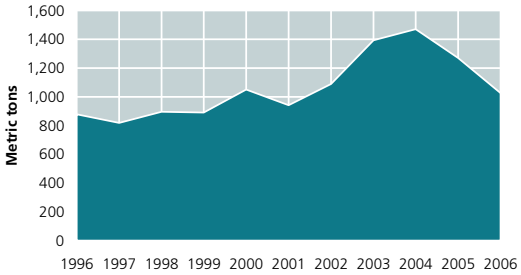
Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Metric tons	878	818	896	891	1,051	942	1,088	1,392	1,471	1,270	1,025



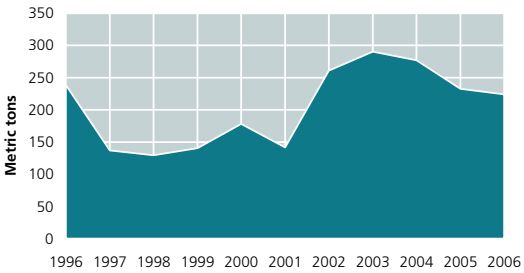
(a) Data refer to 2005 England and Wales only.

Fig. 100: Global seizures of cannabis rezin, 1995-2005

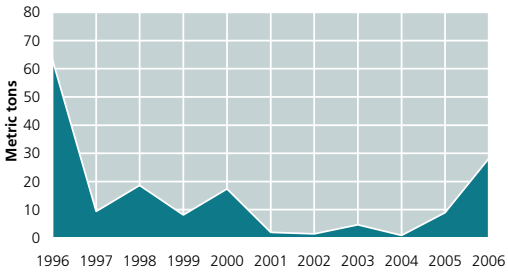
CANNABIS RESIN INTERCEPTED - WORLD: 1996 - 2006



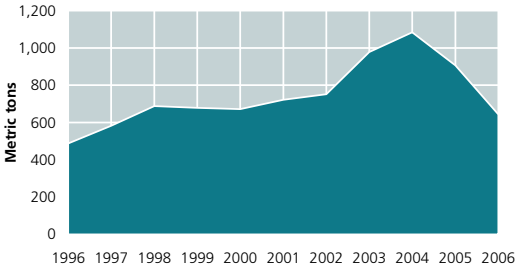
CANNABIS RESIN INTERCEPTED - ASIA: 1996 - 2006



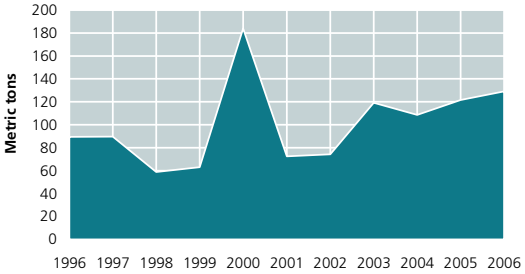
CANNABIS RESIN INTERCEPTED - AMERICAS: 1996 - 2006



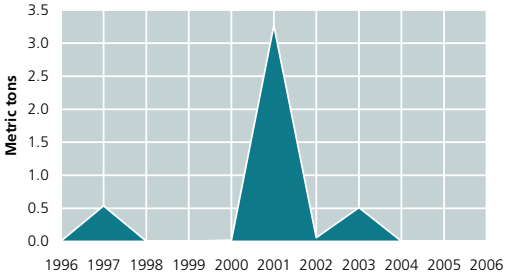
CANNABIS RESIN INTERCEPTED - EUROPE: 1996 - 2006



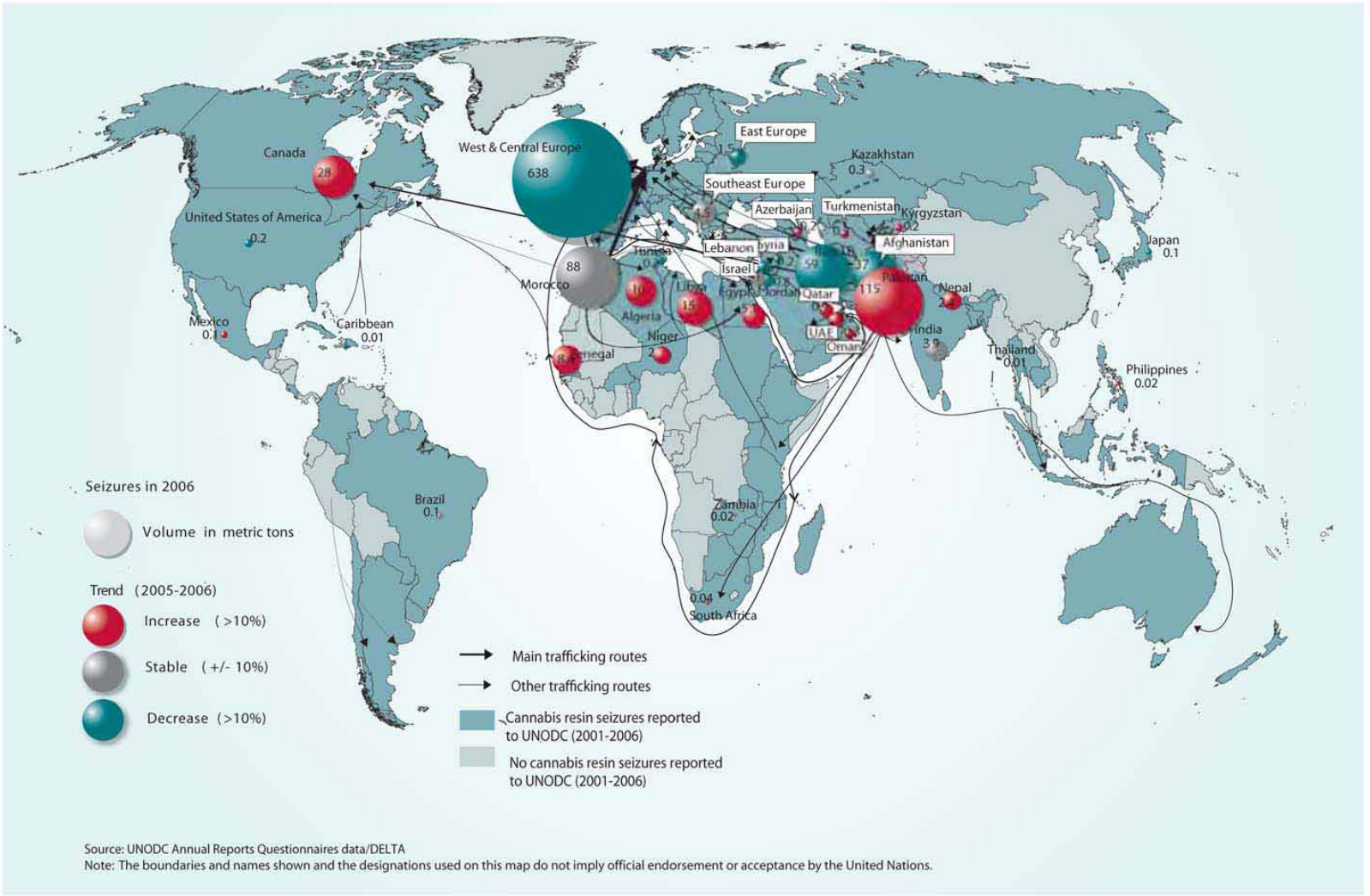
CANNABIS RESIN INTERCEPTED - AFRICA: 1996 - 2006



CANNABIS RESIN INTERCEPTED - OCEANIA: 1996 - 2006



Map 16: Trafficking in cannabis resin, 2006 (countries reporting seizures of more than 10 kg)



Source: UNODC Annual Reports Questionnaires data/DELTA

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

1.4.4 Consumption

Though the number of cannabis users increases, global cannabis prevalence rates remain stable

Cannabis is the most commonly used drug in the world. In 2006, UNODC estimates that 166 million people, or 3.9 percent of the global population age 15-64, used cannabis. The total number of cannabis users has increased steadily over the 1997/98 to 2006/07 period. However, the stability of the prevalence rate suggests that the number of cannabis users has not outpaced overall population growth, or growth in the number of non-cannabis users, during the same period.

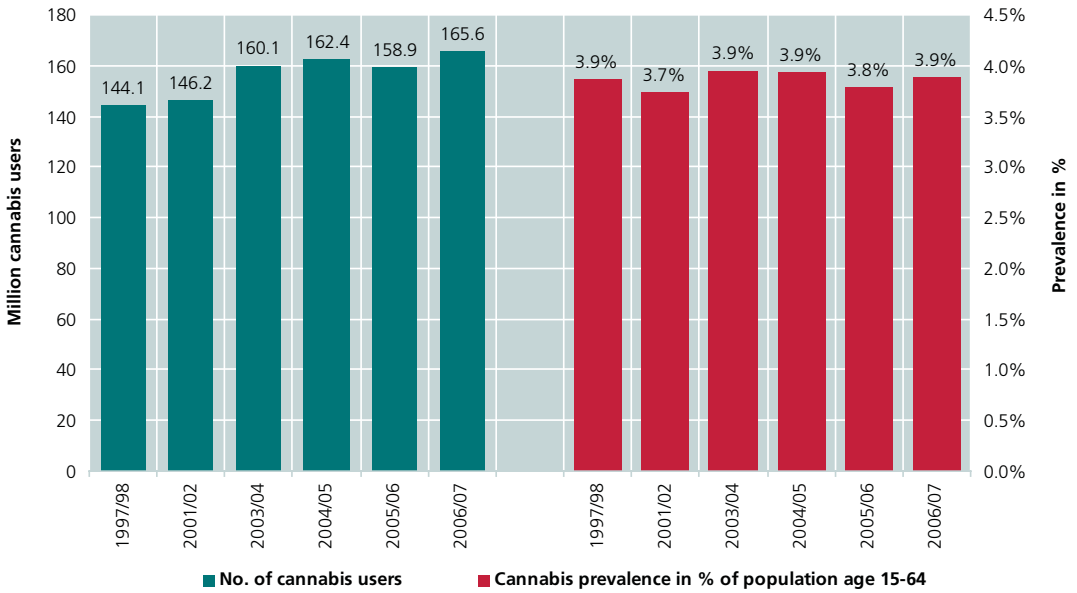
The prevalence rates are highest in the Oceania region (14.5% of the population age 15-64), followed by North America (10.5%) and Africa (8%) The highest rates in Africa are found among the countries of West and Central Africa (12.6%) and the countries of southern Africa (8.4%). The average prevalence rate in West and Central Europe amounted to 6.9%.

Asia has the lowest prevalence rate (2% on average), reflecting the low levels of cannabis use reported from East and South-East Asia (0.9%). An average prevalence rate of 3.2% is estimated for South Asia; 3.6% for the Near and Middle East and 4.2% for Central Asia.

As compared to the estimates provided in the *World Drug Report 2007*, cannabis use declined in the Oceania region, in West & Central Europe and in North America. Use increased in South America (Non-NAFTA countries), Africa and Asia.

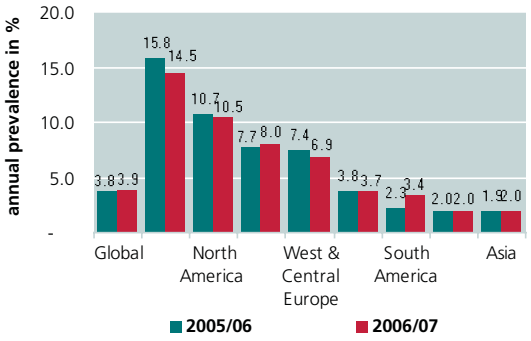
Although Asia has the lowest prevalence rate, UNODC estimates suggest that Asia contains the greatest number of cannabis users (some 51 million), almost a third of the estimated total, ahead of Africa (42 million) and the Americas (41 million) which account for a about a quarter each of the total number of cannabis users. Europe, with about 29 million users, accounts for less than a fifth of global cannabis use and the Oceania region for about 2%.

Fig. 101: Global cannabis use, 1997/98 – 2006/07



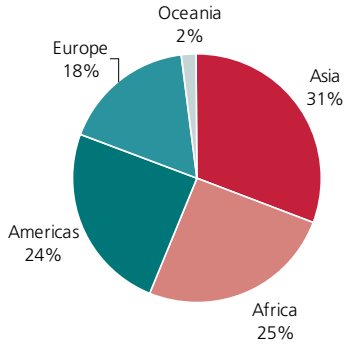
Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

Fig. 102: Cannabis prevalence rates per region, 2005/06 and 2006/07



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC

Fig. 103: Cannabis consumption in 2006 – regional breakdown (N = 165.6 million)



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

Table 9: Annual prevalence of cannabis use, 2006 or latest year available

	No. of users	in % of population 15-64 years
EUROPE	29,200,000	5.3
West & Central Europe	22,100,000	6.9
South-East Europe	1,700,000	2.0
Eastern Europe	5,400,000	3.7
AMERICAS	40,500,000	6.9
North America ("NAFTA")	30,600,000	10.5
South America ("Non-NAFTA")	9,900,000	3.4
ASIA	51,100,000	2.0
OCEANIA	3,200,000	14.5
AFRICA	41,600,000	8.0
GLOBAL	165,600,000	3.9

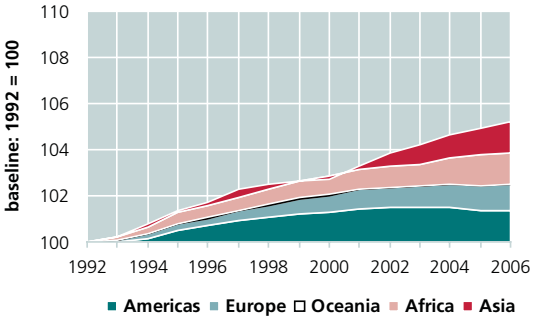
Above global average

Below global average

Around global average

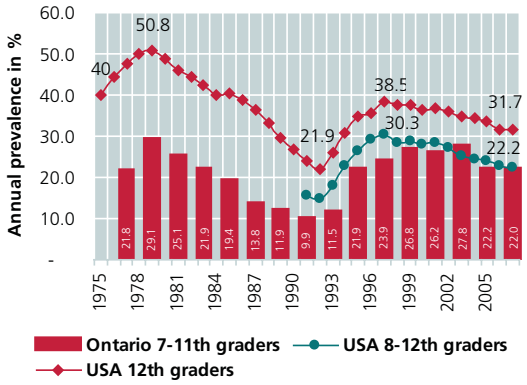
Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

Fig. 104: Cannabis use trends as perceived by experts: regional contribution to global change, 1992-2006



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates

Fig. 105: Annual prevalence among high-school students in the USA and in Ontario, Canada, 1975-2007



Sources: NIDA, *Monitoring the Future, 2007* and CAMH, *Ontario Drug Use Survey* 2007.

Analysis of expert perceptions indicates the same trend

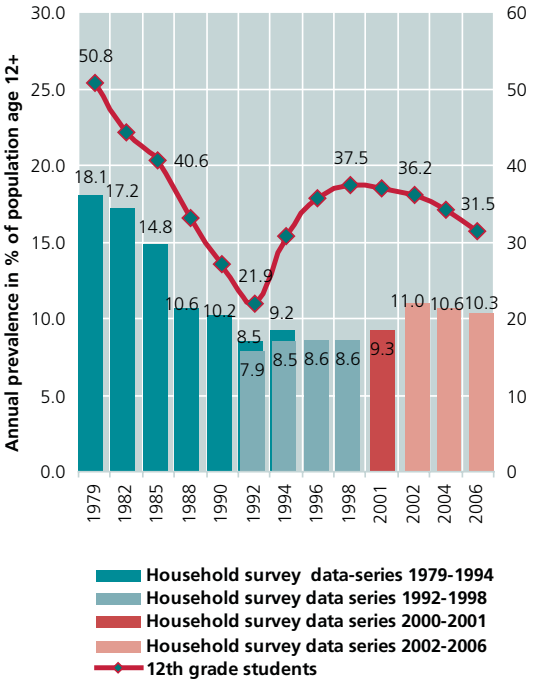
An assessment of expert perceptions provided by States Members through the ARQ reports suggests that the total number of cannabis users continued to increase in 2006. The regional breakdown of expert opinions suggests that cannabis use increased strongly in the 1990s across most regions except Asia. Over the last few years, experts perceive cannabis use as stabilizing or falling slightly in the industrialized countries of North America, West and Central Europe and the Oceania region. Experts perceive cannabis use continuing to rise in many developing countries of Africa, South America and Asia.

Cannabis use stabilizing/declining in North America

In 2006/07 cannabis use stabilized in North America as compared to year earlier, but the mid-term trend shows a declining rate of growth. Between 1997 and 2007, cannabis use in the USA declined by 27% among 8th-12th graders, and by 18% among 12th graders. As compared to its peak in 1979, annual prevalence among 12th graders showed a large decline (38%). A significant decline in cannabis use was also reported among high-school students in Ontario, Canada, between 2003 and 2007 (-21%). Between 2005 and 2007 cannabis use remained basically unchanged.

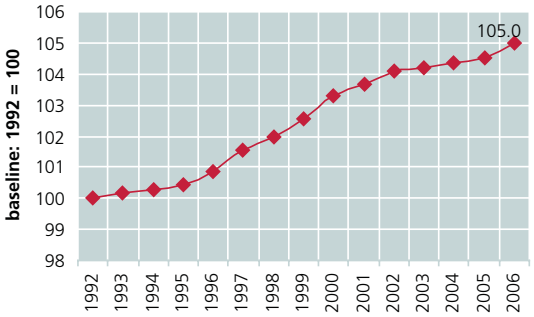
The prevalence of cannabis use also stabilized among the general population in the USA (10.3% in 2006). Over the 2002-2006 period, data show a small decline (from 11% to 10.3%). Cannabis use has fallen substantially over the last three decades in the United States.

Fig. 106: USA: cannabis use among the general population, age 12 and above, 1979-2006



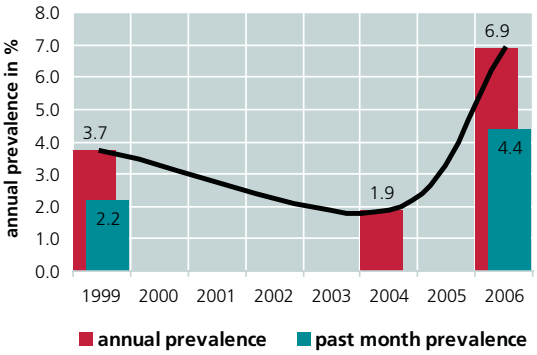
Sources: SAMHSA, *2006 National Survey on Drug Use & Health* and previous years (1994, 1998 and 2001). Note: methodological changes in the household surveys may make affect the accuracy of direct comparisons, however, broad statements about trends are likely possible.

Fig. 107: Cannabis use trends as perceived by experts in Latin America and Caribbean region 1992-2006



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, CICAD, HONLEA reports, local studies, UNODC estimates.

Fig. 108: Cannabis use in Argentina among the population age 12-65, 1999-2006



Sources: SEDRONAR, *Estudio Nacional en Población General sobre Consumo de Sustancias Psicoactivas 2006*, Buenos Aires 2007 and previous years.

Use increases in Latin America

Increases in cannabis use continue to be reported from countries in Latin America. Expert perceptions gathered for the ARQ's in nine countries of Latin America and the Caribbean reported cannabis use increasing in 2006 (up from seven countries in 2005 and five countries in 2003). Stable trends were recorded for 11 countries. Perceptions of increase for the year 2006 were reported from Argentina, Uruguay, Paraguay, Peru, Venezuela, Jamaica, the Dominican Republic, Honduras and Mexico.

The most significant increase in 2005 was reported from the continent's largest country, Brazil, reflecting a rising availability of cannabis products from neighbouring Paraguay. The annual prevalence of cannabis use has more than doubled in Brazil, from 1% in 2001 to 2.6% in 2005.[1]

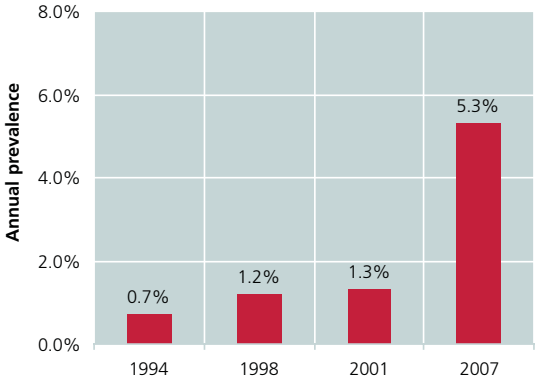
A new household survey conducted in Argentina showed an even stronger increase in the annual prevalence rate of cannabis use, rising from 1.9% of the population age 16-64 in 2004 to 6.9% of the population age 12-64 in 2006 - reversing a previous downward trend. Cannabis use in Argentina now takes place at levels similar to those reported in West and Central Europe. Most of the cannabis consumed in Argentina is reported to originate in neighbouring Paraguay, where cannabis production is expanding.

Uruguay has also experienced an increase of use. Following rather modest growth in the 1990s, the annual prevalence of cannabis use quadrupled among the population age 15-65, from 1.3% in 2001 to 5.3% in 2007.

Use also rising in Africa, though at a slower pace

Over the 1998-2006 period, the cannabis use trend for Africa increased more strongly than the trend at the global level. However, the expansion of cannabis use in Africa may be losing its momentum. A total of 12 countries reported rising levels of cannabis use in 2006, 9 countries perceived the situation to have stabilized and 2 reported a decline. In 2005 and 2004, 16 countries 18 countries, respectively, reported increases in use.

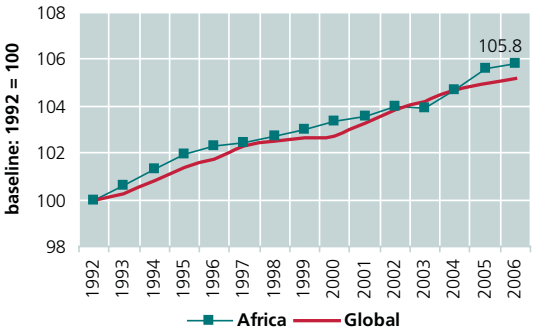
Fig. 109: Cannabis use in Uruguay among the population age 15-65, 1994-2007



Sources: Observatorio Uruguay de Drogas (OUD), *Encuesta Nacional en Hogares sobre Consumo de Drogas 2007* and Secretaria Nacional de Drogas y Junta Nacional de Drogas, *Encuesta Nacional de Prevalencia del Consumo de Drogas 2001*.

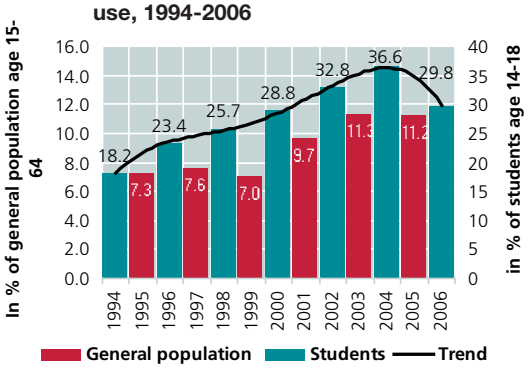
1 CEBRID, Il Levantamento Domiciliar sobre o Uso de Drogas Psicotrópicas no Basil: Estudo Envolvendo as 108 Maiores Cidades do Pais, 2005, Sao Paolo 2006 and CEBRID, Il Levantamento Domiciliar sobre o Use de Drogas Psicotrópicas no Basil: Estudo Envolvendo as 107 Maiores Cidades do País, Sao Paolo 2002.

Fig. 110: Cannabis use trends as perceived by experts in Africa, 1992-2006



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

Fig. 111: Spain: annual prevalence of cannabis use, 1994-2006



Sources: Ministerio de Sanidad y Consumo, Secretaría, General de Sanidad, Delegación del Gobierno para el Plan Nacional sobre Drogas, Informe de la Encuesta Estatal sobre Uso de Drogas en Estudiantes de Enseñanzas Secundarias, 2006-2007, EMCDDA Statistical Bulletin and UNODC, Annual Reports Questionnaire Data.

Cannabis use in major markets of Western Europe shows a stabilization or decline

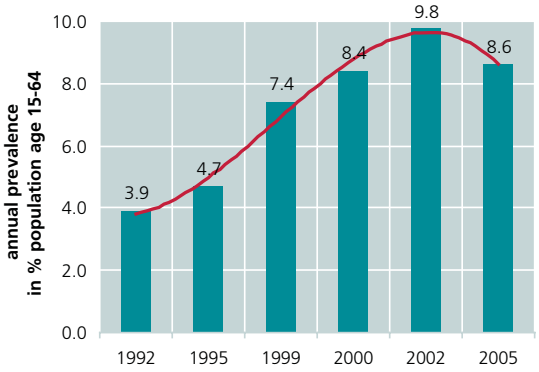
Experts in the majority of countries in West and Central Europe (16) perceived cannabis use levels to have stabilized in 2006 (up from 14 in 2005 and 12 in 2004). Eleven countries reported an increase in cannabis use. More recent data suggests that in several of the main cannabis markets of West and Central Europe, consumption of cannabis started to decline. It is possible that there is an increase in risk-awareness associated with cannabis use in some of these countries and that this, combined with an improvement or increase in prevention activities, is leading to a stabilization. While the effect of this is difficult to gauge, there has been some media focus on the rising potency of cannabis in Western Europe and its health consequences.

Lower availability of cannabis exports due to the downturn in production in Morocco could also have had a positive impact. The best example here is Spain, located on the main trafficking route between Morocco and the rest of Europe. Following years of increase, household survey data for Spain indicated a stabilization of the cannabis market over the 2003-2005 period. Spain reported annual prevalence rates among the general population age 15-64 of 11.3% and 11.2% in 2003 and 2005 respectively. Subsequent surveys done amongst high-school students (age 14-18), found an 18 % decline of cannabis use over the 2004-2006 period. Cannabis use among students is now back to the levels recorded at the beginning of the new millennium.

Data for France also show a stabilization of cannabis use, where annual prevalence of cannabis use fell from 9.8% in 2002 to 8.6% in 2005. Cannabis use in France is almost back to the levels reported at the beginning of the new millennium. The decline in cannabis consumption paralleled a growing risk perception of the potential dangers associated with cannabis use.[2]

Cannabis use continues declining in the United Kingdom. Cannabis use fell among the general population in England and Wales from 10.9% in 2002/03 to 8.2% of the population age 16-59 in 2006/07 - a cumulative decline of almost 25%. Cannabis use among those 16-24 year olds fell from 28.2% in 1998 to 20.9% in 2006/07, equivalent to a decline of 26%. The decline in youth use began shortly after 1998, as the UK drug prevention

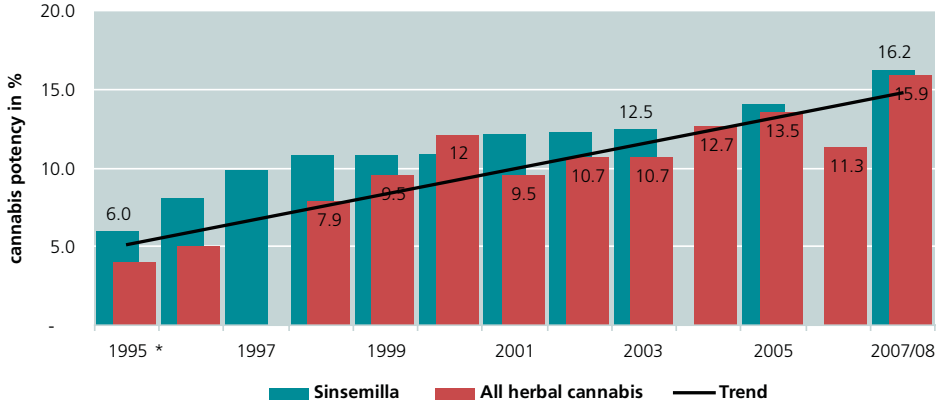
Fig. 112: France: annual prevalence of cannabis use among the general population (age 15-64),1992-2005



Source: EMCDDA, Statistical Bulletin and UNODC, Annual Reports Questionnaire Data

2 A study done by Eurobarometer in France suggested that the perception that occasional use of cannabis was harmless fell among those 15-24 year olds between 2002 and 2004 from 48% to 30%, which was the strongest such change across Europe. (European Commission, Eurobarometer, *Young people and drugs*, Brussels, June 2004).

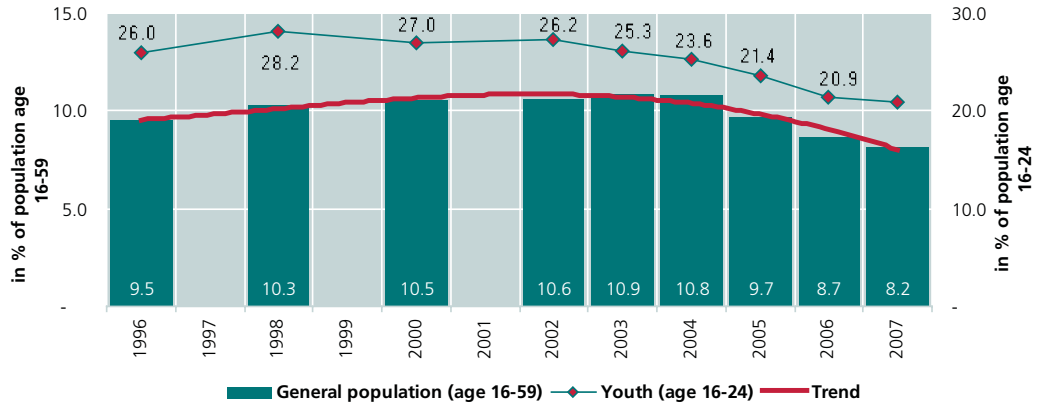
Fig. 113: England & Wales: THC level of cannabis, 1995-2007/08



* herbal cannabis data for 1995 and 1996 refer to imported cannabis only; ** Sinsemilla data shown for 2005 refer to the median results of samples selected over the 2004/05 period (14%); the median potency for sinsemilla for 2007/08 amounted to 15%.

Sources: EMCDDA, An overview of cannabis potency in Europe, Lisbon 2004, EMCDDA, Statistical Bulletin on Drugs, 2004-2007, UK Focal Point on Drugs, 2007 National Report to the EMCDDA, David J. Potter, Peter Clark, and Marc B. Brown, "Potency of D9–THC and other Cannabinoids in Cannabis in England in 2005: Implications for Psychoactivity and Pharmacology", Journal of Forensic Science, January 2008, Vol. 53, No. 1, UK Home Office, Home Office Cannabis Potency Study 2008, London 2008.

Fig. 114: England & Wales: annual prevalence of cannabis use, 1996-2007



Source: UK Home Office, *British Crime Survey, 2006/07*, London 2007.

budget was expanded and a number of new prevention activities targeting youth became operational.

The decline of cannabis use in the UK has also occurred parallel to an increase in the potency of the drug. In 2008, the UK Government reclassified cannabis from a Schedule C to a Schedule B drug. This will take effect in 2009.

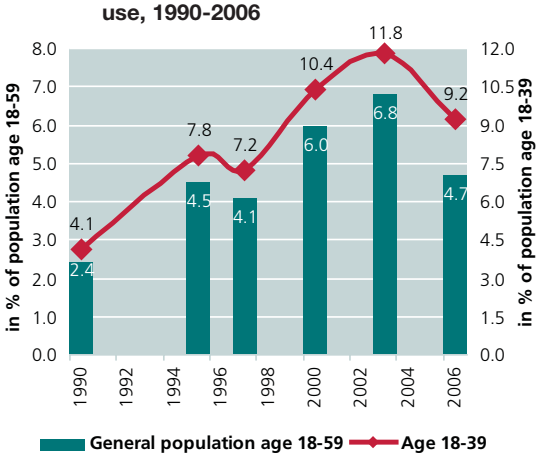
The average potency of cannabis herb in England and Wales doubled over the last decade, from approximately 8% in 1998 to 16% in 2007/08. Two factors were responsible for this:

- shift away from traditional overseas cannabis herb imports from the Caribbean, West Africa and Asia to more potent European (mainly British or Dutch) hydroponic cannabis grown from selected seed varieties and propagation of female plant cuttings. This material, also known in the UK as '*skunk*' or '*sinsemilla*'[3], consists mostly of the flowering tops of female plants and is easily distinguished from the traditionally imported material from overseas markets. In 2002 about half the cannabis herb in the UK was thought to have consisted of traditional imports and the other half of *skunk* or *sinsemilla*. By early 2008, the proportion of the more potent *sinsemilla* had increased to more than 90% of samples seized.[4]

3 The term *sinsemilla* refers to female plant cuttings. It does not necessarily have to be grown indoors.

4 The results are based on 2,921 samples submitted in early 2008 by

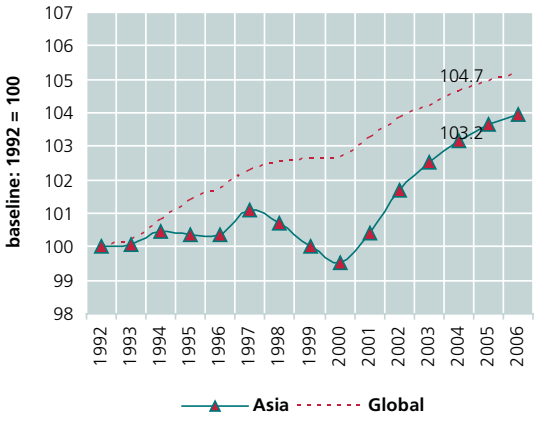
Fig. 115: Germany: annual prevalence of cannabis use, 1990-2006



* 1990: general population

Sources: German Ministry of Health, EMCDDA, Institute for Therapy Research (IFT) and UNODC, Annual Reports Questionnaire Data. (General population estimate for 1990 extrapolated from 18-39 age group)

Fig. 116: Cannabis use trends as perceived by experts in Asia, 1992-2006



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

- The THC content of *sinsemilla* found on the UK market increased by about 50% between 1998 and 2007/08 and more than doubled between 1995 and 2007/08. (from 6% to 16.2%: range 4.1 to 46%). The potency of 'imported cannabis herb' increased from around 4% in 1995 to 8.4% in 2007/08: range 0.3 to 22%.

Contributing to increased average potency is the fact that there have been shifts away from cannabis resin to cannabis herb. While cannabis resin used to be more potent than cannabis herb, it is now, at 5.9% in 2007/08 (range 1.3 to 27.8%) much lower than the 16% average cannabis herb potency. There are no indications of an increase in the THC content of cannabis resin. Cannabis resin accounted for 70% of the UK cannabis market in 2002 and has declined, probably due to the declines in resin production in Morocco, to 16% in 2007/08. In parallel, the *sinsemilla* share in the UK cannabis market rose from 15% in 2002 to 55% in 2004/05 and 81% in 2007/08, according to the latest UK home office study.[5]

Data for Germany also show a decline in cannabis consumption. A recently released study on drug use in Germany indicates a strong decline (-30%) in cannabis use amongst the general population age 18 – 59 between 2003 and 2006. The prevalence rate of cannabis consumption fell from 6.8% in 2003 to 4.7% in 2006. In parallel, the availability of cannabis appears to have deteriorated[6]. The decline in cannabis use is also reflected in cannabis related consumption offences which declined by 16% between 2004 and 2006. Offences related to the import of large quantities of cannabis fell by 50% between 2002 and 2006.[7] Police data suggest that the downward trend in cannabis consumption also continued in 2007. The number of cannabis herb related seizures fell by 7% and those related to cannabis resin fell by a further 17%. Police data suggest that cannabis use is particularly declining for cannabis resin, less so cannabis herb which is increasingly being produced domestically[8].

Most of the stabilization or decline in use rates in Europe was observed in larger cannabis markets. However, there has been also a stabilization among the Nordic countries, including in countries where prevalence rates are still low. Cannabis use did not grow significantly in Finland, Norway, Denmark or Iceland.

In Sweden, the results of one survey, officially reported to UNODC, suggested an annual prevalence rate of cannabis use of 3.1% in 2006 among the general population aged 16 – 64. However, ongoing monitoring of

twenty-three Police Forces in England and Wales, who were requested to submit samples confiscated from street-level users. UK Home Office, *Home Office Cannabis Potency Study 2008*, London 2008.

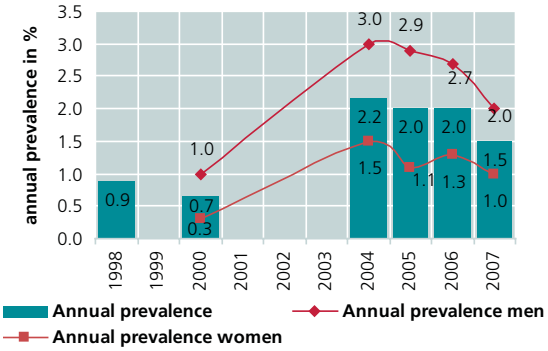
5 UK Home Office, *Home Office Cannabis Potency Study 2008*, London 2008.

6 Cannabis resin prices increased by 7% at the retail level (on a year earlier) and cannabis herb prices rose by 14% in 2006DBDD, 2007 National Report to the EMCDDA by the REITOX National Focal Point Germany.

7 Bundeskriminalamt, *Bundeslagebild Rauschgift, 2006 Tabellenanhang,* Wiesbaden 2007.

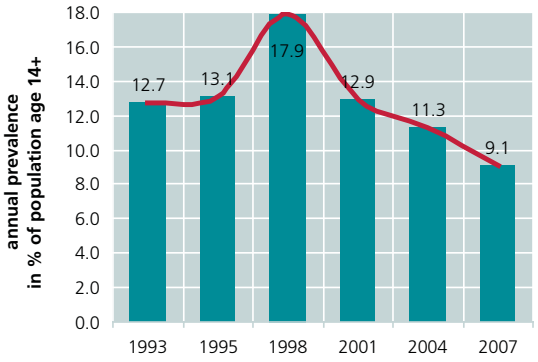
8 Bundeskriminalamt, *Rauschgift, Jahreskurzlage 2007*, Wiesbaden 2008.

Fig. 119: Sweden: annual prevalence of cannabis use among the population age 16-64*, 1998-2007



* data for 2004 refer to age group 18-64.
Sources: Statens Folkhälsoinstitut, *Den nationella folkhälsoenkäten Hälsa på lika villkor,* Östersund, 2007 and previous years and EMCDDA, *Statistical Bulletin 2007*.

Fig. 117: Australia: annual prevalence of cannabis use among the population age 14 and above, 1993-2007



Source: Australian Institute of Health and Welfare, *2007 National Drug StrategyHousehold Survey*, April 2008.

cannabis use by the Swedish National Institute of Public Health (Statens Folkhälsoinstitut), using the same methodology and the same survey instrument over time, found that cannabis consumption remained stable in 2006 at 2%. For 2007, the survey prepared by the Statens Folkhälsoinstitut reported that cannabis use fell to 1.5% of the population age 16-64. If this is compared to the peak rate of 2.2% in 2004, it would be equivalent to a 30% decline in cannabis use over the 2004-2007 period. A decline in cannabis use was also observed amongst high-school students and military recruits in 2007.

Increasing use is being perceived by experts in several countries of central and eastern Europe. Cannabis use is reported to have increased in 2006 in Ukraine, Belarus, Poland, Slovakia and Hungary. In the Czech Republic, which has the highest prevalence rates of cannabis use of all the new EU countries, the market was reported to have stabilized. Cannabis use was also reported to have stabilized in Austria and Slovenia.

Stabilization of use was reported for most countries of South-East Europe, notably Croatia, Romania, Bulgaria and Turkey. Increases in 2006 were reported in Albania.

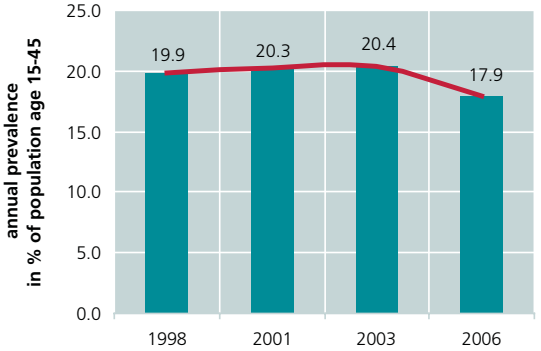
The overall prevalence of cannabis use is rising in Asia

UNODC's cannabis trend indicator, weighted by the cannabis using population, showed clear upward trend for Asia for the year 2006. Using the year 2000 as a baseline, recent annual increases in Asia has been stronger than the increase at the global level. The number of Asian countries reporting cannabis consumption to have increased rose from 8 in 2005 to 10 in 2006. In parallel, the number of Asian countries reporting a decline in cannabis use fell from 10 to 7 in 2006. Seven Asian countries saw cannabis use stabilize in 2006.

Overall prevalence rates fall again in Oceania

The decrease in cannabis use in the Oceania region continued. In Australia, the annual prevalence of cannabis use fell almost 20%, to 9.1% of the population age 14 and above, between 2004 and 2007. The 2007 rate was close to 50% lower than the rate of use in 1998. The decline in cannabis use between 2004 and 2007 was strongest amongst the 14-19 year olds, amongst whom use fell by 28%, indicating that prevention activities in schools played an important role in lowering cannabis use. (School surveys seem to confirm this). There was a 20% decline in use in the 20 to 29 age group, a 24% decline in the 30 to 39 age group and 5% decline in the 40 to 49 age group.

Fig. 118: New Zealand: annual prevalence of cannabis use among the population age 15-45, 1998-2006



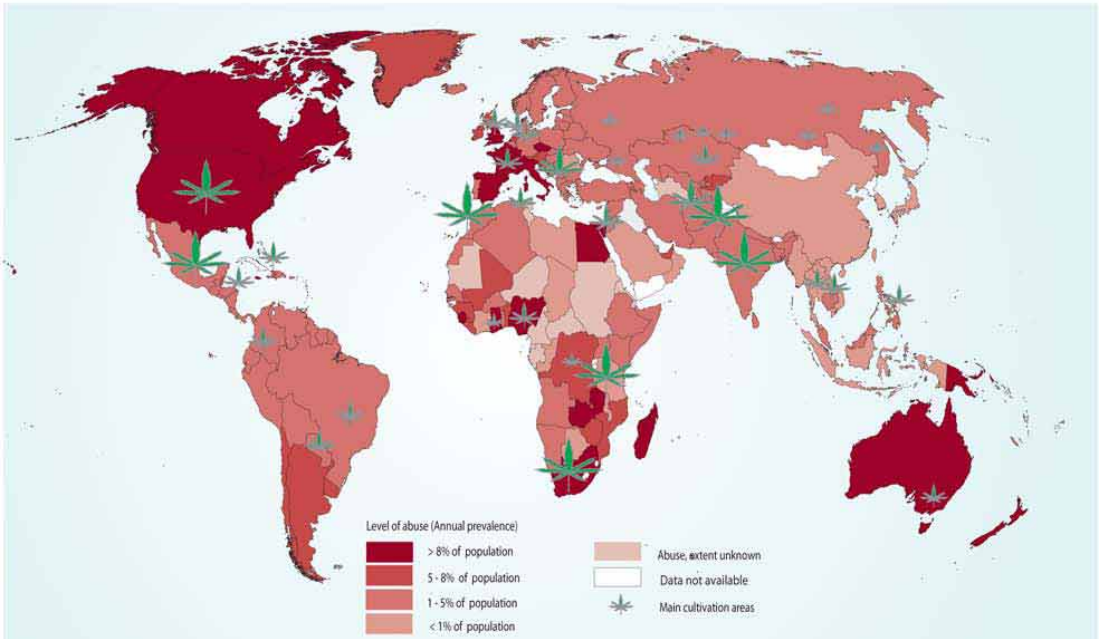
Source: Centre for Social and Health Outcomes Research and Evaluation, *Trends in drug use in the population in New Zealand: Findings from national household drug surveying in 1998, 2001, 2003 and 2006*, Auckland 2007.

The overall fall in cannabis use in Australia occurred in parallel to some decline in availability, although this could be unrelated to the reduction in use. The proportion of people who had been offered cannabis fell from 21% in 2004 to 17% in 2007.

The attitude towards cannabis use seems to be changing. Support for the legalization of cannabis fell from 27% in 2004 to 21% in 2007. In 2004 still 23.2% of Australians considered it to be 'acceptable' to regularly consume cannabis. This proportion declined to 6.6% in 2007. Support for higher penalties for cannabis traffickers rose from 58% in 2004 to 63% in 2007.

Household survey data from New Zealand also showed a decline of cannabis use in recent years. The annual prevalence of cannabis use fell 12% from 20.4% among the population age 15-45 in 2003 to 17.9% in 2007. The perceived availability of cannabis declined also declined.

Map 17: Use of cannabis 2006-2007



Sources: UNODC Annual Reports Questionnaires data; Government Reports, US Department of State; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); Drug Abuse Information Network for Asia and the Pacific (DAINAP); UNODC Global Assessment Programme on Drug Abuse (GAP), Inter-American Drug Abuse Control Commission (CICAD).

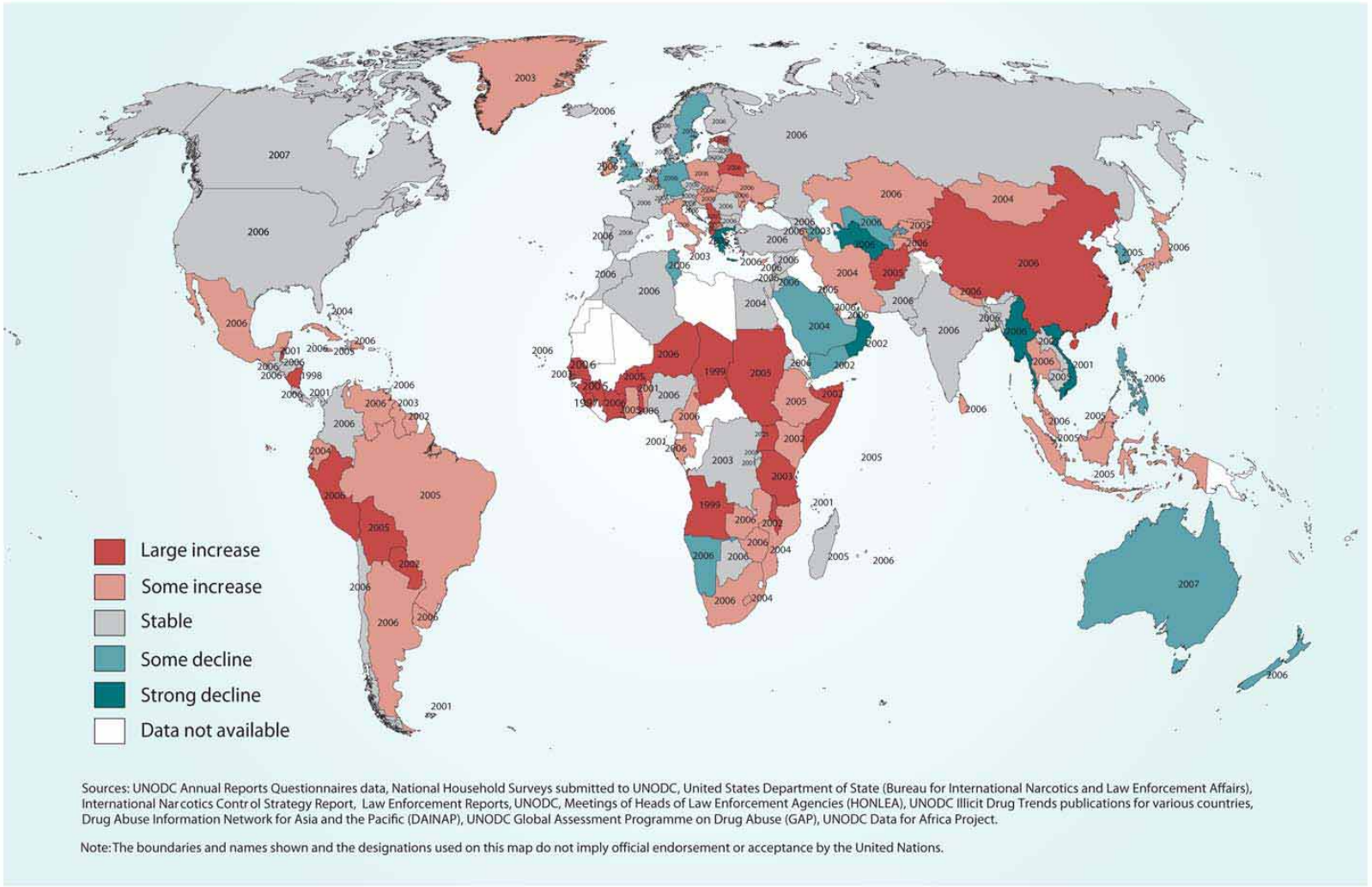
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 18: Ranking of cannabis in order of prevalence in 2006

Source: UNODC Annual Reports Questionnaires data/DELTA; Government Reports, US Department of State; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); Drug Abuse Information Network for Asia and the Pacific (DAINAP); UNODC Global Assessment Programme on Drug Abuse (GAP); Inter-American Drug Abuse Control Commission (CICAD); UNODC Rapid Assessment Studies, Council of Europe, ESPAD.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 19: **Changes in the use of cannabis 2006, (or latest year available)**



Sources: UNODC Annual Reports Questionnaires data, National Household Surveys submitted to UNODC, United States Department of State (Bureau for International Narcotics and Law Enforcement Affairs), International Narcotics Control Strategy Report, Law Enforcement Reports, UNODC, Meetings of Heads of Law Enforcement Agencies (HONLEA), UNODC Illicit Drug Trends publications for various countries, Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP), UNODC Data for Africa Project.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

1.5 Amphetamine-type stimulants market

1.5.1 Summary Trend Overview

The overall stabilisation which was reported in the ATS market has continued into the 2006/2007 period. The stabilisation has occurred parallel to some developments which may give clues to its root causes. First, the precursor control programmes which have been increasingly put in place to control the main inputs to methamphetamine and ecstasy seem to be having an effect. The ephedrine and pseudo-ephedrine needed for methamphetamine manufacture and the P-2-P needed for the production of amphetamine, and the 3,4-MDP-2-P, piperonal and safrole needed for the production of ecstasy are more difficult to come by now than in the late 1990s and early 2000s when these markets were really expanding. Second, prevention programmes seem to be taking hold, and there appears to be more awareness of the risk associated with these drugs in their major markets. This likely has an impact on some consumers on its own, and on others when combined with less availability or higher prices.

In some regions, manufacturers are already circumventing controls by substituting controlled precursors with those outside international controls, such as pharmaceutical preparations, natural ephedra plant extracts, and uncontrolled chemicals. This type of innovation has precedent in illicit drug markets and the growing inter regional aspect of the ATS market (as opposed to intra regional) will make this type of substitution more viable. Trafficking routes continue to develop in places that lack the enforcement and forensics infrastructure to detect precursor trafficking. These new routes have a wide geographical spread and include even Africa and West Asia, South and Central America, often starting from East Asia, or South Asia.

Effective precursor control is changing the pattern of production as well. The contraction in US domestic manufacture, for example, is being offset by manufacture from Mexico and to some degree Canada. This type of development probably implies that larger and more organized international groups are becoming involved in the trade in some areas. Distribution networks are thought to be replacing independent dealers in some market areas.

ATS seizures increased over the past few years but remain below the level of their peak in 2000. In 2006 they increased again, but only marginally. A total of 99 countries and territories reported seizures of ATS to UNODC for 2006. While trafficking in ATS end-products remained primarily an *intra*-regional affair, there are growing indications that increased *inter*-regional cooperation and trafficking are occurring. Trafficking in ATS precursor chemicals continues to be predominantly *inter*-regional – with the majority of precursors trafficked out of South, East, and South-East Asia.

Consumption in this market has enjoyed a healthy period of overall stability with increases slowing in some of the main markets. Expansion has slowed in Europe and Asia and use has declined in North America, but consumption has increased in the Near and Middle East and in Africa. Other shifts may also be occurring. Tableted methamphetamine is increasingly identified in crystalline (crystal) methamphetamine markets in South East Asia and the substitution of licit ATS use for illicit ATS use has been identified in North America.

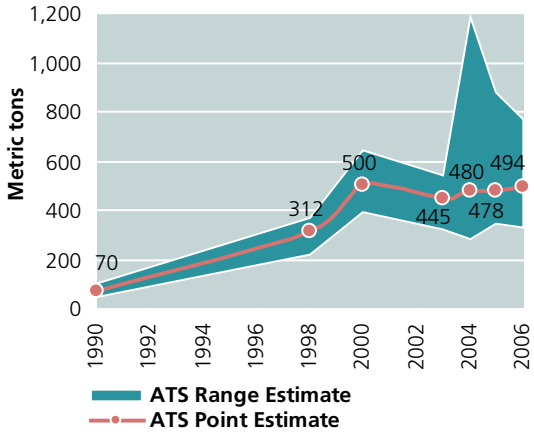
It is clear that some of the dynamics of this market are changing but difficult to say in which direction things are moving. Stability in the market could suggest greater innovation on the part of organized crime and, therefore, a more dynamic market overall. The increase of manufacture in 'super laboratories' and greater inter-regional trafficking could be part of this.

1.5.2 Production

Global ATS manufacture approximately 494 metric mt

UNODC conservatively estimates[1] that 2006 amphetamine-type stimulants (ATS) manufacture, worldwide, was between 330 mt to 770 mt, with a mid point estimate of approximately 494 mt. (Mid point estimates year to year are not comparable.)

Fig. 119: Manufacture point-estimates and ranges of amphetamine-type stimulants: 1990-2006



Sources: UNODC estimates based on UNODC, *Annual Reports Questionnaire Data / DELTA*; International Narcotics Control Board (INCB), *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances, 2007* (March 2008); and World Customs Organization (WCO), *Customs and Drugs Report 2006* (June 2007).

1 Manufacture of ATS can only be estimated indirectly. Estimates are based on three sub-components: Global seizures of ATS end-products (i.e., drug seizures), inclu. seizures of ATS drugs and estimated drugs seizures rates; ATS-related chemical precursor seizures, inclu. seizures of precursor chemicals, estimated seizure rates and estimated end product synthesis and; ATS consumption (i.e., prevalence rates), inclu. estimated users globally by drug type, amount typically used and seizures of ATS drugs. A methodology to arrive at such estimates was first developed in UNODC's report *Ecstasy and Amphetamines - A Global Survey 2003*. The current model assumes the following globally: the average seizure rates for either precursor chemicals or finished ATS product are estimated at 10%; the average consumer (i.e., from casual use to addict) of amphetamines group drugs (amphetamine or methamphetamine) uses 30 mg daily of active ingredient; and the average consumer of the ecstasy group (MDMA, MDA, MDEA/MDE) uses three times per week and consumes an average of 90 mg of active ingredient per episode. Note, the current manufacture model is not designed to account for States Members that do not report or under-report.

The ATS markets encompass two groups of substances: the *'amphetamines group'* (amphetamine, methamphetamine, and non-specified amphetamine) and the *'ecstasy group'* (MDMA, MDA, and MDE/MDEA).[2] Of these, 79% of all ATS manufactured, or 392 mt, were from the amphetamines group of substances. Trends indicate that global manufacture may be increasing somewhat for the amphetamines group and decreasing for the ecstasy group. In 2004, the proportion of ATS related to amphetamines group was 75%. In 2006, it is estimated that methamphetamine accounted for 68% of the amphetamines group. This proportion has declined from 84% in 2003, the first year proportional estimates of the amphetamine group were made. The increase in global manufacture appears to be led by increased amphetamine manufacture for the Near and Middle East.

While manufacture estimates are provided in a trend graph, it is important to note that they are only comparable year-to-year in the broadest of sense. Previous manufacture data points represent the best available estimate at the time of past publication and are not revised annually. Thus, if recalculated today the manufacture point-estimate from the year 2000 would likely change. Given this caveat, only limited conclusions on the overall trend appear reasonable: 1) following a dramatic increase throughout the 1990s, it appears that ATS manufacturing estimates remain largely unchanged since 2000; 2) substantial regional shifts in ATS appear to be occurring globally; and 3) changes in drug manufacturing and trafficking techniques are making ATS estimates more challenging to develop.

Clandestine ATS production is concentrated in North America, East & South-East Asia, Europe, Oceania and Southern Africa

ATS manufacture is regionally specific, related to both market demand and chemical availability. Methamphetamine manufacture is typically located throughout East and South-East Asia, North America, and Oceania, where its precursor chemicals are more readily available and demand is high. Amphetamine manufacture contin-

2 *Non-specified amphetamines* are cases where States Members did not clearly identify of the substance seized. Additionally, a small amount of other synthetic stimulants are also included such as fenetylline, methylphenidate, phenmetrazine, methcathinone, amfepramone, pemoline, phentermine, 4-MTA, and 2C-B.

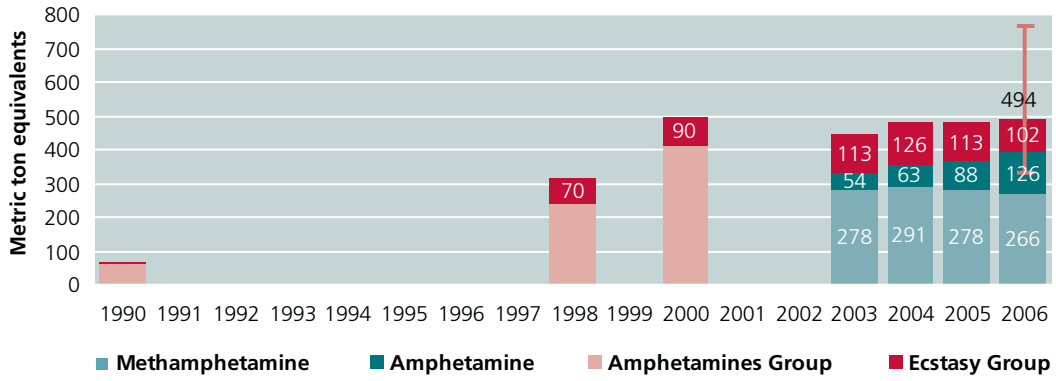
Table 10: Manufacture point-estimates and ranges of ATS, by group (in metric mt): 2006

Based on	'Amphetamines' Group (methamphetamine, amphetamine)		'Ecstasy' Group (MDMA, MDA, and MDE/MDEA)		Amphetamine-Type Stimulant Total	
	Point-Estimate	Range	Point-Estimate	Range	Point-Estimate	Range
Consumption	313	250 - 376	131	117 - 146	445	368 - 521
Drug seizures	439	289 - 571	59	41 - 76	497	330 - 647
Precursor seizures	423	282 - 605	116	77 - 166	539	359 - 770
Overall Average	**392**	**250 - 605**	**102**	**41 - 166**	**494**	**330 - 770**
Overall Average*	**392**	**320 - 469***	**102**	**87 - 120***	**494**	**421 - 574***

*These narrower ranges are calculated on the basis of 'propagation of error' statistics.

Sources: UNODC estimates based on UNODC, *Annual Reports Questionnaire Data / DELTA;* International Narcotics Control Board (INCB), *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances, 2007* (March 2008); and World Customs Organization (WCO), *Customs and Drugs Report 2006* (June 2007).

Fig. 120: Manufacture estimates of amphetamine-type stimulants, by type: 1990-2006



Sources: UNODC estimates based on UNODC, Annual Reports Questionnaire Data / DELTA; INCB, *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances, 2007* (March 2008); WCO, *Customs and Drugs Report 2006* (June 2007); UNODC, *2007 World Drug Report* (and previous years); and UNODC, *Ecstasy and Amphetamines – Global Survey 2003*.

ues to take place largely in Europe.[3] While there is limited ecstasy manufacture in East and South-East Asia, it predominately occurs in North America, Western Europe and Oceania.

Precursor chemical seizures and detections of small laboratories drop

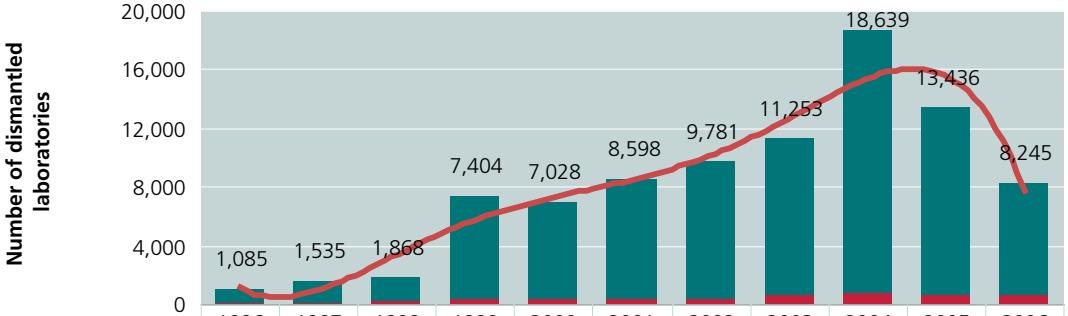
Methamphetamine can be manufactured using a variety of licit precursor chemicals and simple processes. Manufacture takes place in industrial-sized mega and super-laboratories[4] and the more common small kitchen-laboratories. The unfortunate convenience of manufacture is such that nearly every ATS laboratory detected worldwide produced methamphetamine, making methamphetamine the most widespread of all the ATS. The detection and dismantling of methamphetamine laboratories is a key strategy in the reduction of ATS manufacture. Following consistent increases in the number of globally detected ATS laboratories throughout the 1990s – peaking at a record high of 18,639 in 2004 – detections fell to 8,245 in 2006. While the number of clandestine laboratories detected worldwide has decreased dramatically, methamphetamine manufacture has not. Methamphetamine is increasingly manufactured in super or mega-laboratories.

In the absence of consistent forensic data on laboratory precursors, synthesis processes and production capacity (i.e., frequency of cycle, amount of output, and purity levels), ATS precursors seizures can provide some additional, albeit limited, information on manufacture

3 The exception to this is methamphetamine production (Pervitine) located in the Czech Republic.

4 The USA defines a mega-lab as the capability to produce 1,000 kg or more per production cycle; a super-lab is defined as the capability to produce 10 lbs (4.5 kg) or more per production cycle.

Fig. 121: ATS laboratories (all sizes) reported to UNODC, by type: 1996-2006



	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Methamphetamine	967	1,396	1,658	7,019	6,609	8,166	9,323	10,660	17,851	12,782	7,647
Other ATS labs	118	139	210	385	419	432	458	593	788	654	598
ATS lab total	1,085	1,535	1,868	7,404	7,028	8,598	9,781	11,253	18,639	13,436	8,245

Source: UNODC, Annual Reports Questionnaire Data / DELTA.

trends. According to reports, ATS related precursor chemical seizures declined in 2006 to their lowest level in five years.[5] Expressed in ATS (drug weight equivalents), seizures were flat throughout the mid-1990's, but beginning in 2000 rose to 62 mt peaking in 2004 at a record high of 323 mt. In 2006, the amount (in drug weight equivalents) fell to 29 mt.

Global seizures of ATS precursors in 2006 included:

- 30.2 mt of ephedrine and 0.7 mt of pseudoephedrine, sufficient to manufacture some 20 mt of methamphetamine;
- 2,607 litres of P-2-P[6], sufficient to manufacture 1.3 mt of amphetamines; as well as 1.1 mt of phenylacetic acid (a chemical precursor capable of producing P-2-P and thus a 'pre-precursor' for the manufacture of amphetamine and methamphetamine), sufficient to manufacture some 1.6 mt of amphetamine; in addition small quantities of norephedrine (6 kg) were seized which is also used to manufacture amphetamine;
- 8,816 litres of 3,4-MDP-2-P (also known as PMK), sufficient to manufacture 7.1 mt of ecstasy (MDMA); as well as small quantities of piperonal and safrole used in the manufacture of ecstasy.[7]

The decline of ATS precursor chemical seizures in 2006 was due to the fall in seizures of ephedrine (from 40.3 to 30.2 mt; a 25% decrease) and pseudoephedrine (from 0.8 to 0.7 mt; a 12% decrease). Decreases were also noted in ecstasy precursors 3,4-MDP-2-P (from 12,924 to 8,816 litres; a 32% decrease), piperonal (from 6.2 mt to just 107 grams) and safrole (from 5,707 to 39 litres). The pre-precursor phenylacetic acid also decreased from 47.7 mt to 1.1 mt.[8]

These declines are due in part to increased enforcement and changes in manufacture and trafficking. The combination of effective precursor controls throughout North America, the International Narcotics Control Board's (INCB) increasingly utilized precursor Pre-Export Notification (PEN) system, *Project PRISM* , and successes from *Operation Crystal Flow,* have all stemmed the flow of precursors.[9] According to INCB reports, the 2007 *Operation Crystal Flow* alone identified 35 suspicious transactions and prevented the diversion of 52 mt of precursor chemicals (capable of producing approximately 48 mt of methamphetamine).[10] This is equiva-

5 Precursor seizure source data come from the International Narcotics Control Board, *2007 Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances, 2007 and prior years (New York, 2008)* unless otherwise noted. Mexico did not submit their Form D precursor seizure data to INCB for publication in the 2007 precursor report, however this information was provided in the Annual Report Questionnaire (ARQ). These seizures were considerable and therefore included in all calculations based on precursors chemicals.

6 P-2-P (1-phenyl-2-propanone), also known as benzyl methyl ketone (BMK), is typically used for the manufacture of amphetamine but can be also used for the production of methamphetamine.

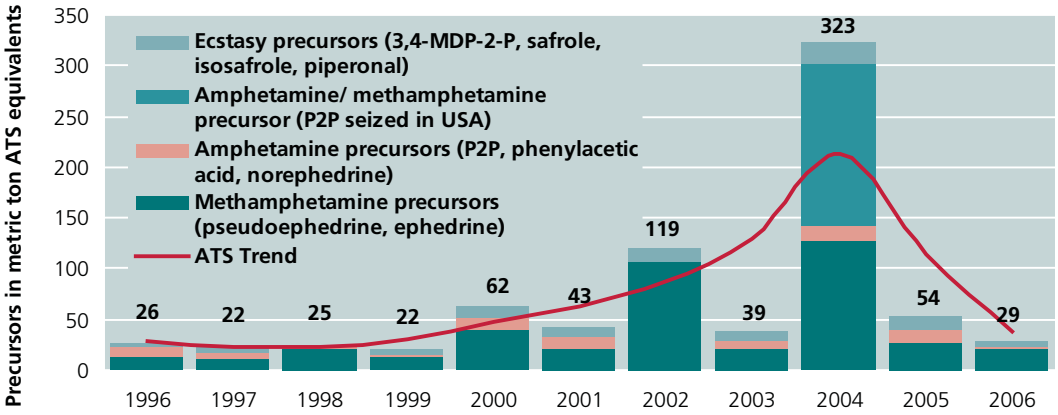
7 Piperonal, safrole, oils rich in safrole, and isosafrole are all precursors for the production of 3,4-MDP-2-P and thus pre-precursors for the manufacture of ecstasy.

8 It should be noted that 2005 was an exceptional year for phenylacetic acid seizures. Excluding that year, there is an increasing trend in phenylacetic acid seizures.

9 Project PRISM (Precursors Required In Synthetic drug Manufacture) refers to the INCB sponsored multi-country task force investigating precursors diversion required in the synthetic drug manufacture.

10 Operation Crystal Flow, was a six-month operation in 2007 used to monitor consignments of ephedrine and pseudoephedrine shipped to countries in Africa, the Americas and West Asia. International Narcotics Control Board, *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances, 2007* (March 2008).

Fig. 122: Reported seizures of ATS precursors, expressed in metric ton ATS equivalents: 1996-2006



Source: UNODC calculations based on INCB data and conversion factors, INCB, *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances*, 2007 (March 2008, and previous years) and UNODC, Annual Reports Questionnaire Data / DELTA.

lent to more than 20% of the current methamphetamine manufacture estimate.

Tactics in clandestine manufacture changing

Given the volume and availability of ATS worldwide, it is likely that the reported decreases in seized precursor chemicals reflect changes in manufacture methods and trafficking routes. There is growing evidence of manufacture involving precursors outside international controls such as pharmaceutical preparations, natural ephedra plant extracts, and currently unrestricted chemicals (e.g., benzaldehyde, N-acetyl-pseudoephedrine acetate, phenyl-acetylcarbinol, N-methyl-DL-alanine).[11] Several Western European countries reported multi-ton ephedra plant extract diversions and seizures in 2006. Germany alone reported an attempted 800 mt diversion.[12] Twenty-eight per cent of the 739 kg of pseudoephedrine seized was in the form of a pharmaceutical preparation.[13]

Trafficking routes continue to develop in places that lack the enforcement and forensics infrastructure to detect precursor trafficking. For example, according to recent reports, illicit shipments totalling over 120 mt of primarily pseudoephedrine (and some ephedrine) were identified as being either sent or smuggled through countries in Africa (Burundi, D.R. of Congo, Ethiopia, Ghana, Kenya, Nigeria, Somalia, Sudan, UR. of Tanzania and Zambia) and West Asia (I.R. of Iran), Iraq, Syrian Arab Republic, and the United Arab Emirates).[14] This amount alone would represent approximately 80 mt of methamphetamine, or one-third of current global production estimates.[15] Countries in South and Central America identified attempted diversions of significant amounts of pseudoephedrine in 2006, including, Bolivia, Chile, Colombia, Ecuador, Guyana, Peru, El Salvador, and Guatemala.[16] These diversions have recently been reported in the form of pharmaceutical preparations. An unconfirmed 2008 report identified a significant seizure, undertaken by Guatamalan authorities, of pharmaceutical preparations (i.e., pseudoephedrine tablets) in a maritime shipment from Hong Kong.[17] Modest amounts of ATS precursors also have been seized by Argentine and Costa Rican authorities. Most of these interceptions were likely destined for Mexican laboratories.

11 These chemicals are precursors and pre-precursors used in the creation of illicit ATS, for example: benzaldehyde can be used in the manufacture of either amphetamine or methamphetamine; N-Acetylpseudoephedrine acetate for methamphetamine; phenylacetylcarbinol is a precursor to the methamphetamine precursors ephedrine and pseudoephedrine and; and N-methyl-d,l-alanine for the creation of methamphetamine (albeit a less cost-effective process). UNODC, Annual Reports Questionnaire Data; International Narcotics Control Board, *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic, 2007* (March 2008); Drug Enforcement Administration, Office of Diversion Control at the 4th International Forum on the Control of Precursors for ATS, Tokyo Japan, February 2008; New Zealand National Drug Intelligence Bureau, *2006 Clandestine drug laboratory (clan lab) report*, (April 2007).

12 International Narcotics Control Board, *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic, 2007* (March 2008).

13 Pharmaceutical preparations are drugs intended for human or veterinary use, presented in their finished dosage form (e.g., pills and tablets). Over-the-counter cold medicines in pill form or bulk precursors tableted into pill form would be classified as pharmaceutical preparations, and are often used in clandestine manufacture.

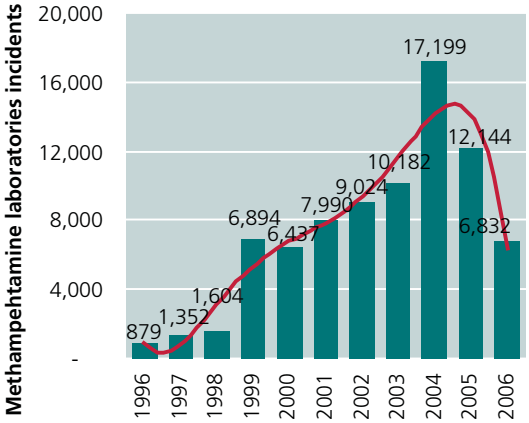
14 International Narcotics Control Board, *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic, 2007* (March 2008), HONLEA 17th, Nairobi, Sept 2007.

15 Ibid.

16 International Narcotics Control Board, *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic, 2007* (March 2008).

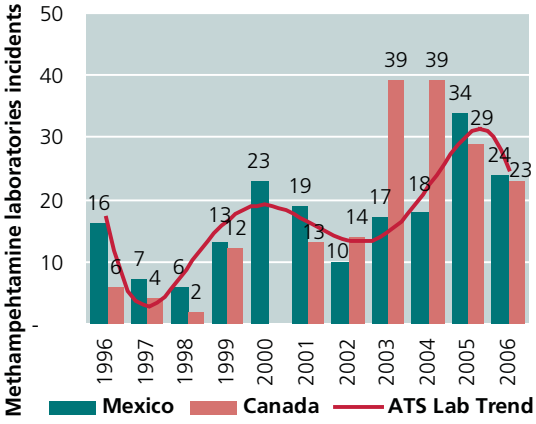
17 Agence France Presse, "*Guatemala seizes illegal pseudoephedrine from Hong Kong*", April 25, 2008.

Fig. 123: USA: Number of reported methamphetamine laboratory incidents (all sizes): 1996-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA

Fig. 124: North American (all sizes, excludes USA) methamphetamine laboratories reported: 1996-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA

Methamphetamine manufacture indicates global shifts

Comprehensively enacted precursor controls which, *inter alia*, reduced the availability of pseudoephedrine-based cold medicines, combined with sustained law enforcement pressure, have had a dramatic impact upon domestic manufacture of methamphetamine in the USA.[18] After steady increases throughout the mid-1990s the number of clandestine laboratory incidents reportedly peaked at 17,199 in 2004. Since then the number of laboratories incidents has declined to the lowest levels since 2000 and preliminary data for 2007 suggest that this decline continued.[19]

The number of detected methamphetamine laboratories in the USA remained high. In 2006, the 6,832 labratory incidents in the USA accounted for 88% of all dismantled methamphetamine laboratories worldwide.

Gaps in the domestic market are being filled

The contraction in US domestic manufacture is being offset by manufacture from Mexico and, to some degree, Canada.[20] Mexican drug organizations appear to be circumventing chemical restrictions in order to maintain significant methamphetamine manufacture. Similarly, distribution networks have replaced smaller independent dealers and are expanding in many the USA. Canada's methamphetamine manufacture and role as an exporter nation has been increasing over the last few years. There are indications that Canadian methamphetamine is intended for distribution in the UK, Australia, New Zealand, Japan, and the USA.[21]

While the number of laboratories seized in Mexico and Canada remains small compared to the USA, the laboratories seized tend to produce significant amounts of ATS end product. 15 of the 23 (65%) methamphetamine laboratories seized in Canada in 2006 were super laboratories with the capacity to produce nine or more kilograms of methamphetamine per production cycle. Only one reported laboratory seized was classified as a small kitchen lab.[22]

The number of methamphetamine laboratories dismantled by the Mexican authorities has increased over the last decade, with 24 reported in 2006.[23] However, recent reports indicate that production has expanded geographically, and is now found in the centre of the country where previously no production existed. Clandestine manufacture has been reported in nine of the country's 31 states.[24] The Mexican authorities have greatly reduced the amount of imports of methamphetamine precursors and have upgraded import control regulations in 2008. Mexico intends to eliminate the retail of products containing methamphetamine precursors in 2009. Despite

18 Office of National Drug Control Policy, Drug Facts – Methamphetamine; www.whitehousedrugpolicy.gov/drugfact/methamphetamine/index.html

19 Note, lab incidents are defined to include all counts of various types of laboratories (e.g., extraction, manufacturing, cutting, and packaging), chemical dumpsites, and drug processing chemical and glassware seizures. Source: Drug Enforcement Administration, www.usdoj.gov/dea/concern/map_lab_seizures.html

20 National Drug Intelligence Center, *National Methamphetamine Threat Assessment 2008* (Dec., 2007).

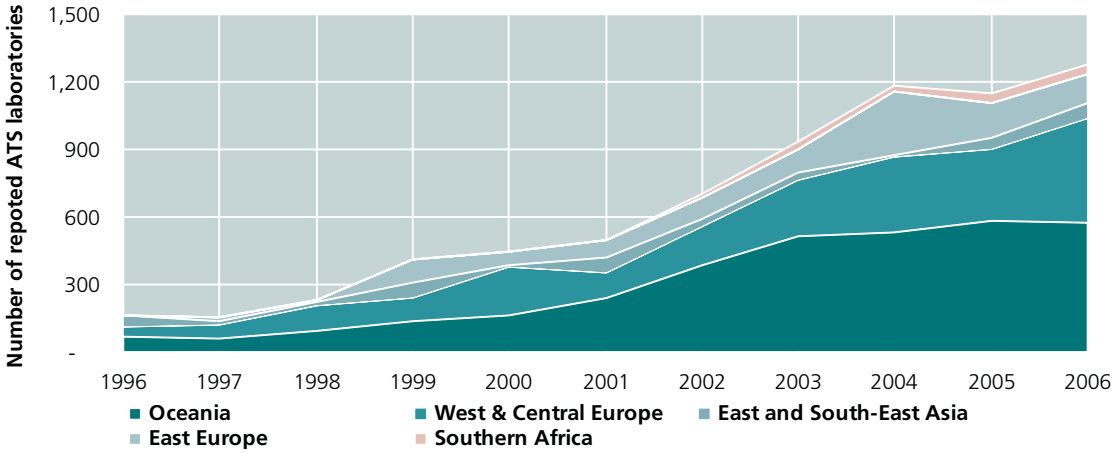
21 ARQ; Royal Canadian Mounted Police (RCMP): *Drug Situation Report 2006*; National Drug Intelligence Center, *National Drug Threat Assessment 2008, Nov.,2007.*

22 ARQ; National Drug Intelligence Center, *National Methamphetamine Threat Assessment 2008*, Dec., 2007.

23 This also includes counts of combination laboratories which produce both methamphetamine and cocaine.

24 Drug Enforcement Administration, Office of Diversion Control at the 4th International Forum on the Control of Precursors for ATS, Tokyo Japan, February 2008.

Fig. 125: Number of ATS laboratories, all sizes, excluding North America reported to UNODC: 1996-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

these commendable actions, reduced licit ephedrine and pseudoephedrine imports are being offset by criminal organizations' importation of derivatives of pseudoephedrine. Preliminary data suggest that precursor and clandestine laboratory seizures may have increased in 2007.[25]

Methamphetamine manufacture grows in many other regions

In 1996, 163 ATS laboratories were dismantled or identified outside of North America. As of 2006, that number increased eight-fold to 1,301 laboratories. These are predominately methamphetamine laboratories. The strongest growth was seen in the Oceania, Europe (West, Central, and Eastern), East and South-East Asia, and the Southern Africa region.

Methamphetamine manufacture in Europe is increasing

Europe reported the largest increase in methamphetamine laboratories outside of North America. In 2006, the majority of laboratories were discovered in a limited number of countries in West and Central Europe (421) and East Europe (56). These include laboratories in the Czech Republic (418), the Republic of Moldavia (56), Austria (2) and Lithuania (1). Since 2000, several other European countries have also reported lab seizures including Bulgaria, Germany, Slovakia, Ukraine, and the UK. [26]

In 2006, the Czech Republic reported 418 clandestine methamphetamine laboratory detections, a 60% increase over 2005.[27] This is 88% of all the European methamphetamine laboratories reported to UNODC in 2006. Government reports identify methamphetamine exports to Germany, Slovakia, and Austria. To date, the reported laboratories seized in Europe are small kitchen laboratories, limiting overall manufacture and distribution of methamphetamine. However, it is likely that larger laboratories could exist. In 2006 EUROPOL reported increased exportation, transhipment and diversion of ephedrine and pseudoephedrine in the countries of the European Union. This included attempts to divert ephedrine supplies from Asia into the Netherlands (known only as a location for the manufacture of amphetamine, not methamphetamine). In addition attempts were made to tranship ephedrine from Asia, via the Democratic Republic of the Congo, into Belgium, probably for final shipment to Mexico.[28]

Reports of methamphetamine manufacture in East and South-East Asia are increasing

Over the last decade, the dismantling of methamphetamine laboratories has been reported in Cambodia, China, Hong Kong (SAR of China), Indonesia, Malaysia, Myanmar, Taiwan (Province of China), Thailand, the Philippines, the Republic of Korea, and Viet Nam. In 2006, the total number of dismantled and reported methamphetamine laboratories in East and South-East Asia increased to 66, due to increased detection and reporting by Chinese authorities which accounted for 80% of all reported laboratories in the region.

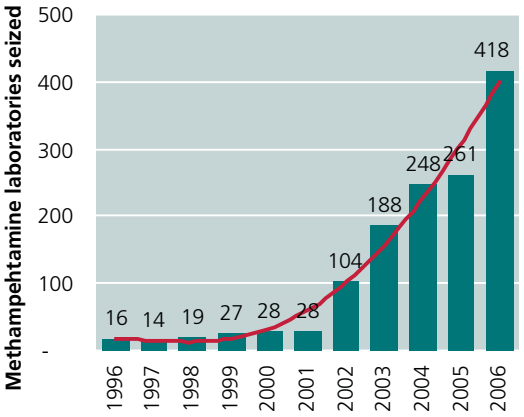
25 US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008).

26 The Russian Federation has only reported the seizure of amphetamine laboratories to UNODC. It is possible that these laboratories could produce methamphetamine. Russia reports seizures of both ephedrine and pseudoephedrine which would point towards the production of methamphetamine (or methcathinone as known as ephedrone).

27 Known locally as Pervitin.

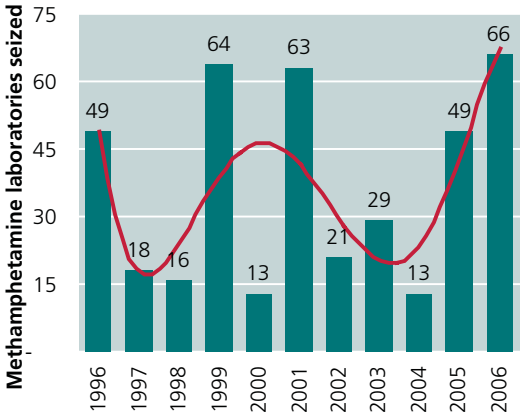
28 EUROPOL, *Production and Trafficking of Synthetic Drugs and Precursors*, The Hague, 1 March 2007.

Fig. 126: Czech Republic: Number of methamphetamine laboratories reported to UNODC (all sizes): 1996-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Fig. 127: Number of East and South-East Asia methamphetamine laboratories (all sizes): 1996-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Compared to other regions the number of East and South-East Asia laboratories seized is small, however the production facilities detected in the region are often of the super- and mega-lab variety.[29] For example, in 2006 and 2007 several methamphetamine mega-laboratories were reported in Indonesia, Malaysia, Cambodia, and the Philippines.[30] To date most mega-laboratories have been reported in East and South-East Asia. The Philippine authorities dismantled three clandestine mega-laboratories and one storage warehouse in 2006. In April 2007, police uncovered the first methamphetamine lab in Cambodia (Kampong Speu province) and seized nearly six mt of drug-related chemicals. and in 2006, authorities dismantled the largest clandestine methamphetamine laboratory ever uncovered in Malaysia.

The Chinese authorities reported the detection and dismantling of 53 methamphetamine producing laboratories in 2006, a 43% increase over 2005 reports (37).[31] Previously, the majority of the clandestine methamphetamine manufacture activity in China occurred in the south-eastern provinces of Fujian and Guangdong. However, controls in both provinces tightened which shifted production to central China, and more recently to the northeast provinces (Shenyang and Liaoning).[32]

Methamphetamine manufacture in Myanmar appears to be increasing. In 2006, eight clandestine methamphetamine laboratories were detected, the highest number reported to UNODC to date. As has been the case in the past, most manufacture is concentrated in the eastern and northern parts of the Shan State and the Wa region. This area borders China and Thailand and exports primarily to those countries. Smuggling tableted methamphetamine into China and Viet Nam through the Lao People's Democratic Republic and Cambodia remains a problem.

The Philippines remains a significant producer, transit country and consumer of crystal methamphetamine (*'shabu'*). In 2006, four clandestine laboratories were discovered along with three chemical warehouses. Preliminary reports for 2007, indicate the number of clandestine laboratories more than doubled with nine laboratories and 13 chemical warehouses discovered. According to reports, drug manufacture is handled by transnational organized crime syndicates working in concert with local drug groups.[33] In the Philippines, ephedrine is smuggled into the country by using mislabelled shipment documents. It is then synthesized using the thionyl chloride process. Labs have primarily been concentrated near the greater Metro Manila area, how-

29 A mega-lab is defined as the capability to produce 1000 kg or more per production cycle; a super-lab is defined as the capability to produce 10 lbs (4.5 kg) or more per production cycle.

30 International Narcotics Control Board, *2007 Annual Report* (March 2008); US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008).

31 China reported a total of 86 drug laboratories for 2006 in the Annual Report Questionnaire. However, it should be noted that these figures are considerably lower than those reported by China in their Country Report at the 31st meeting of Heads of National Drug Law Enforcement Agencies, Asia and the Pacific (HONLAP), Bangkok (November 2007), which cites 132 drug processing locations.

32 US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008); Presentation by Mr. Zhao Wanpeng, Deputy Director of International Cooperation Division, Narcotics Control Bureau, Ministry of Public Security, People's Republic of China, "*Measures Implemented in China for the prevention of Illicit Production of Synthetic Drugs and their Precursors*", at Conference "Europe-Asia Cooperation on Synthetic Drugs and their Precursors", Paris, 6-7 March 2007.

33 *Philippines Country Report,* presented by Mr. Romeo Cruz, Vice Chairman Dangerous Drug Board, at the 4th International Forum on the Control of Precursors for ATS, Tokyo Japan, February 2008.

ever increased law enforcement efforts have pushed production to other areas such as Southern Tagalog, the Bicol, and Mindanao region.[34]

Sub-regional shifts may be signs of effective enforcement

Indonesia has been reporting increasing methamphetamine seizures for the past several years. Prior to 2005, the country reported only nominal seizures, since then however, significant seizures began appearing: 0.4 mt in 2005 and 1.3 mt in 2006. In 2006, a methamphetamine mega-lab of considerable size was reported to UNODC. Additionally, reports for 2007 suggest police seized four laboratories, two of which were crystal methamphetamine (*'shabu'*) laboratories located in industrial parks in Batam, Riau Islands province.[35] A preliminary report suggests that early 2008 seizures of methamphetamine may be in excess of 2006 totals.

Malaysia has also reported increasing ATS seizures since 2004. In 2006, Malaysia seized one of the largest clandestine methamphetamine mega-labs ever reported. This laboratory was located in Kulim, utilized the less common P-2-P precursor, and contained several hundred kilograms of finished and semi-processed methamphetamine.[36] In March 2008 another methamphetamine mega-lab was discovered by authorities in an industrial park in Senai Johor. Arrests included nationals from Canada, Mexico, and Singapore.[37] The combination of mega-laboratory reports and increased seizures mean that production could be intensifying further south in the region.

As law enforcement efforts increase in countries where methamphetamine manufacture is established, there is evidence that production is becoming more international. For example, India, one of the largest exporters of licit ephedrine and pseudoephedrine, discovered a clandestine methamphetamine related extraction laboratory in Mumbai in 2007.[38] Authorities seized 290 kg of pseudoephedrine destined for Australia and arrested five persons including two from Singapore and one Mexican national.[39] Previous manufacture attempts have been reported in Kolkata (2003), Hyderabad (2004), and Gurgaon (2006).[40] Additionally, the Republic of Korea, a low-level consumer nation which last reported a methamphetamine laboratory to UNODC in 2001, discovered a mobile methamphetamine laboratory in 2007.[41]

As an additional way to determine the importance of countries as methamphetamine producers in South-East Asia, UNODC analyses the extent to which they were identified (mentioned) as the origin 'or source' of the seizure in information provided in the Annual Reports Questionnaire.[42] Over the 2002-2006 period, countries with the most mentions were China (38%), Philippines (21%), and Myanmar (21%), followed by Thailand (6.4%), Japan (4.3%) and Lao PDR (4.3%).[43]

Oceania amphetamines laboratory seizures begin to stabilise

Amphetamines manufacture steadily increased over the last decade in the Oceania region, where Australia and New Zealand seized 377 and 211 laboratories respectively. In both countries almost all manufacture is methamphetamine-related.[44] There have also been reports of methamphetamine manufacture in some of the island countries of the Oceania region, including Guam and Fiji. While most incidents appear isolated, several significant trafficking and manufacture cases from Fiji were reported between 2002 and 2004.[45] With neither the necessary legislation nor the enforcement capabilities in place to prevent, detect, or seize precursor chemicals there is concern over the vulnerability of some island countries to illicit market expansion.

The stabilization of Australian domestic production is the result of a combination of factors including: aggressively pursuing the operators of clandestine methamphetamine laboratories, placing restrictions on over-the-counter sales of pharmaceuticals containing pseudoephedrine and monitoring such sales via *Project STOP*. *Project STOP* is a system which notifies pharma-

34 U.S. Department of State, *2008 International Narcotics Control Strategy Report,* March 2007.

35 The Jakarta Post, '*Authorities promise more supervision of industrial zones*', October 30, 2007.

36 UNODC, *Patterns and Trends of Amphetamine-type Stimulants (ATS) and Other Drug of Abuse in East Asia and the Pacific 2006* (June 2007)

37 The Star (Malaysia), '*Mega drug lab busted*', March 8, 2008; The Straits Times (Singapore), S'poreans nabbed in big drug busts in Malaysia, April 7, 2008.

38 United Nations Commodity Trade Statistics Database, 2006

39 *India Country Report on Trends in Precursor Control*, presented by Dr. Saji Mohan and Vinod Ratti, at the 4th International Forum on the Control of Precursors for ATS, Tokyo Japan, February 2008.

40 UNODC, *Amphetamine-Type Stimulants (ATS): Trends in South and South West Asia* (Presentation April 2007); UNODC, *ATS Trafficking Route Information and Select Seizures and Production Facility Seizures in East Asia and the Pacific* (February, 2007)

41 *Current situation and recent trends about ATS in Korea* (Republic), presentation by Jiyeon Kim, Narcotics Control Team, Korea Food and Drug Administration, at the 4th International Forum on the Control of Precursors for ATS, Tokyo Japan, February 2008.

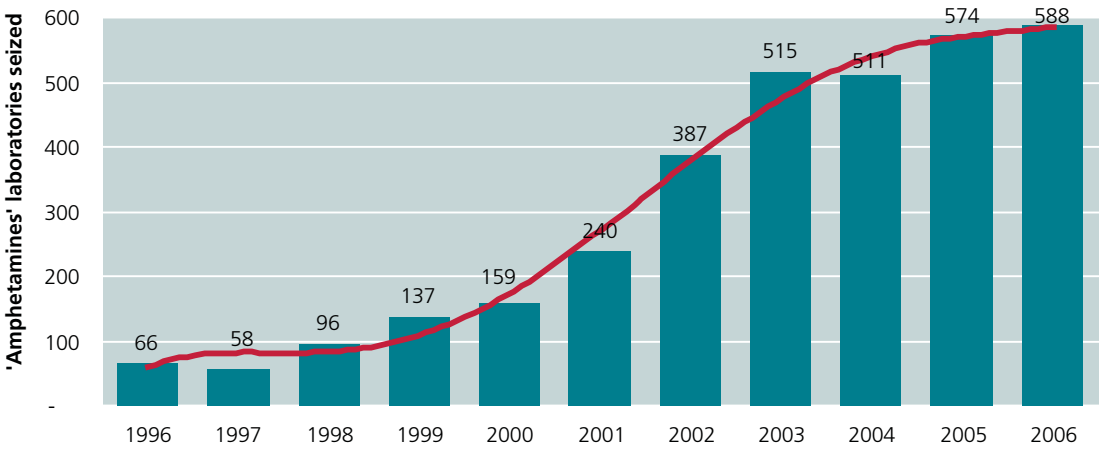
42 Information based on 47 mention of the origin of domestic methamphetamines seized from 24 countries.

43 Mentions of Japan as a source country reflects the difficulty in identifying source countries and transit countries. Japan has reported no clandestine manufacture to UNODC.

44 Australian Attorney-General's Department: *Australian Regional Situation Report 2005-06*; New Zealand National Drug Intelligence Bureau, *2006 Clandestine Drug Laboratory (Clan Lab) Report*, April 2007. Both sets of figures include methamphetamine-related extraction laboratories.

45 McCusker, R. (2006). *Transnational crime in the Pacific Islands: real or apparent danger?* Australian Institute of Criminology, #308, March 2006.

Fig. 128: Oceania: amphetamines laboratories reported to UNODC: 1996-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

cists as to whether a customer is eligible to purchase pseudoephedrine-based pharmaceuticals. Piloted in 2006, the Queensland based program, is believed to have partially contributed to a 23% decline in the number of clandestine laboratories discovered in that State. The program is being implemented nationally as part of the Government's strategy to reduce the diversion of precursor chemicals.[46] Australian methamphetamine prices increased by an estimated 70% between 2000 and 2006.[47] State-police reports indicate that purity levels rose by some 35% from 2000-2005, before falling in 2006.[48] This is consistent with increased control activities initiated in 2006. Household survey data showing a corroborative pronounced decrease in methamphetamine use in 2007.

In 2004, the number of laboratories reported by New Zealand authorities increased to 182, by 2006 authorities reported 211. Evidence suggests that manufacture may be increasingly spreading to regions in the South Island and is managed and financed by organized crime networks.[49]

The manufacture methods used in the clandestine laboratories in Australia and New Zealand are broadly similar. For example, the majority of both Australian (82%) and New Zealand (77%) clandestine methamphetamine laboratories now use hypo-phosphorous synthesis with pseudoephedrine as the predominate precursor. Operators of clandestine laboratories in both countries also show great flexibility in utilizing other methods such as red phosphorus (with iodine or hydriodic acid), lithium and anhydrous ammonia, ephedrine, natural ephedra extracts, and P-2-P.[50]

Methamphetamine manufacture in southern Africa continues to grow

The number of dismantled clandestine methamphetamine laboratories in South Africa increased 55% from 2005 to 2006, with 17 reported to UNODC. There are no indications that South African methamphetamine (known locally at '*tik*') is produced for export – manufacture growth appears to be for increasing domestic consumption. This is reflected in demand indicators for methamphetamine, notably in Cape Town, and more recently in the areas in Gauteng Province (Pretoria and Johannesburg). South Africa, is one of the world's largest importers of licit ephedrine and pseudoephedrine.[51] In 2006, South Africa legally imported 7.2 mt of ephedrine and 9.7 mt of pseudoephedrine, of which 10 kg of ephedrine, and no pseudoephedrine, were reported seized.[52]

46 Australian Crime Commission (ACC), *Illicit Drug Data Report 2005-2006*, May 2007.

47 Prices were weighted by reported methamphetamine seizures amounts between 2003 and 2006.

48 Weighted by reported methamphetamine seizures between 2003 and 2006 period.

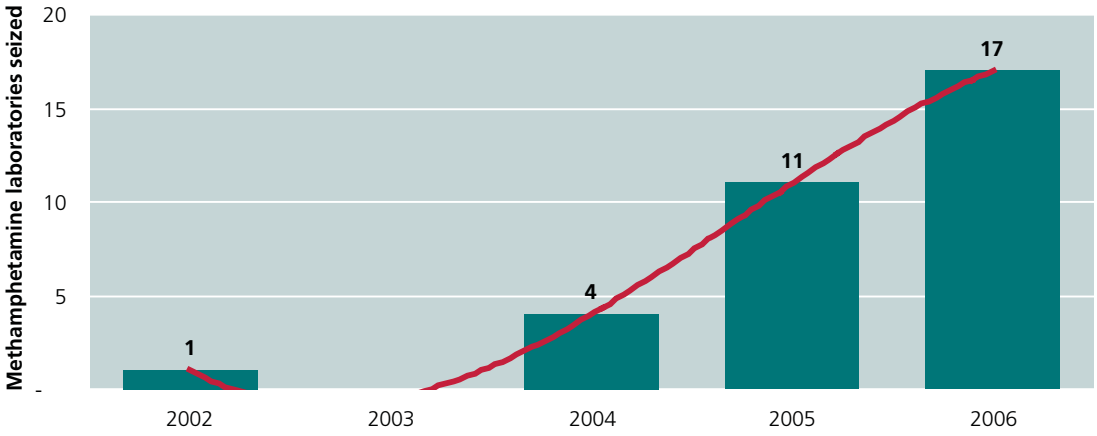
49 New Zealand Police presentation at the *global ISDMP experts's meeting*, Tokyo Japan, February 2008; New Zealand National Drug Intelligence Bureau, *2006 Clandestine Drug Laboratory (Clan Lab) Report*, April 2007

50 P-2-P is typically used for the manufacture of amphetamine, but can be also used for the production of methamphetamine.

51 International Narcotics Control Board, *2007 Annual Report* (March 2008); US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008).

52 United Nations Commodity Trade Statistics Database; International Narcotics Control Board, *2007 Annual Report* (March 2008); International Narcotics Control Board, *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic substances, 2007* (March 2008).

Fig. 129: South Africa: Methamphetamine laboratories reported to UNODC (all sizes): 2002-2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Growth of amphetamine laboratories stabilized; but locations shifted

After a decade of steady increase, reported global amphetamine laboratory seizures have stabilized.[53] The number of dismantled amphetamine laboratories rose from 82 in 1996 to 649 in 2004 before settling at 513 in 2006.[54] Amphetamine-only laboratories were 156 while amphetamine and other ATS manufacture accounted for 357 (70%). Most illicit amphetamine manufacture continues to take place in Europe, where 79% of the 156 amphetamine laboratories dismantled in 2006 were found. Similarly, of the 26 countries reporting the dismantling of clandestine amphetamine producing laboratories over the 2000-2006 period, 19 (73%) were in Europe.

Between 1996-2006 there were 918 clandestine amphetamine laboratories reported in Europe. The largest numbers of dismantled laboratories were reported by the Russian Federation (526 or 57%), Poland (126 or 14%), the Netherlands (88), Germany (52), the UK (34), Bulgaria (19), and Belgium (17). For 2006, the largest number of laboratories in Europe were reported by the Russian Federation (79), followed by Poland (13), Turkey (12), and the Netherlands (8). The number of dismantled laboratories in Poland, Germany, and Belgium declined in 2006.

P-2-P is a precursor chemical used in the illicit manufacture of amphetamine and, to a lesser extent, methamphetamine. Europe as a whole accounts for about 92% of the 2,607 litres of seized P-2-P reported globally in 2006. Because P-2-P was seized primarily in Poland, Denmark, and the Russian Federation, it is likely that the precursor was associated with the production of amphetamine.

Turkey reported the discovery of 12 clandestine amphetamine (Captagon) laboratories in 2006, the largest seizure of laboratories the country has reported to UNODC.[55] The lab types included both manufacturing and tableting operations. At least two of the clandestine laboratories were located in industrial facilities in the southern city of Gaziantep, bordering Syria. In addition, the INCB reported that 197 litres of P-2-P were also seized there in 2006; the largest seizure of its kind by Turkey in recent years.[56] It could be that increased control in Bulgaria has led to a shift in production to Turkey.[57]

Outside of Europe, the largest numbers of dismantled amphetamine laboratories were reported by the USA (29) and India (3).[58] In previous years, amphetamine laboratories were also dismantled in Canada (22 in 2000), Indonesia (6 in 2003), Mexico (1 in 2003) and Chile (1 in 2002).

53 These include amphetamine and non-specified amphetamine laboratories and laboratories that manufactured multiple products; the count excludes exclusive methamphetamine and ecstasy laboratories.

54 These figures include reports from countries which do not have the forensic capabilities to differentiate between various types of ATS laboratories, thus some laboratories may include methamphetamine, ecstasy or some other combination.

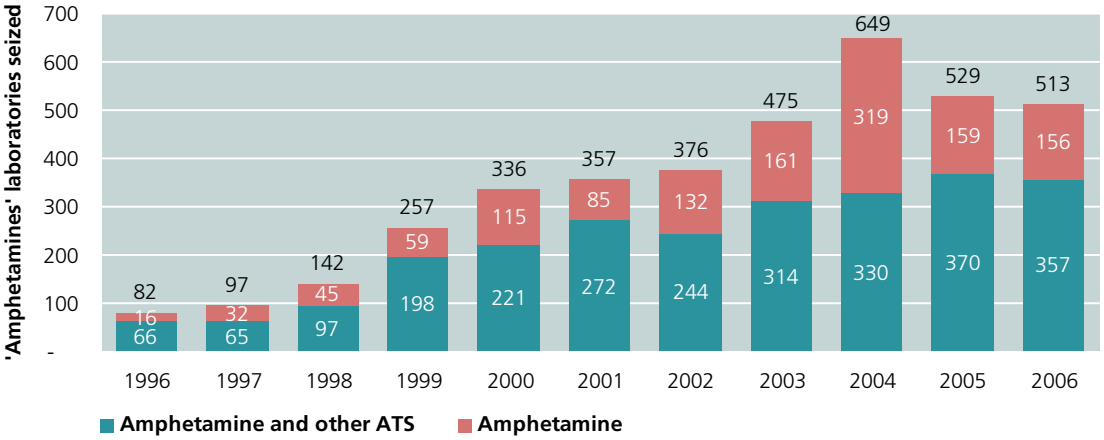
55 A forensics analysis of the Captagon (originally fenetylline, reported more commonly today as amphetamine) analysis was not provide to UNODC, however some reports identified bulk amphetamine and tableted Captagon, therefore the assumption was a combination including amphetamine.

56 International Narcotics Control Board, *Precursors and chemicals frequently used in the illicit manufacture of narcotic drugs and psychotropic, 2007* (March 2008).

57 Annual Reports Questionnaire; EUROPOL, *Amphetamine-type Stimulants in the European Union 1998 – 2007* (July 2007).

58 Incomplete forensics information suggest that the Indian laboratories were possibly methamphetamine-related.

Fig. 130: Number of amphetamine laboratories worldwide, reported to UNODC (all sizes): 1996-2006



Source: UNODC, Annual Reports Questionnaire Data/DELTA.

As previously stated, proxy indicator of manufacture is the reported origin of amphetamine seizures as identified ("mentioned") by States Members. Europe as a whole accounts for nine of the top 10 counties of origin.[59] On this basis, the country receiving the most 'origin' mentions is the Netherlands (67 or 28% of such mentions), followed by Poland (41 or 17%), Belgium (24 or 10%), and the Baltic region (Lithuania, 7%, and Estonia, 5%). Comparing these results with those of previous years suggests that the importance of the Netherlands, Belgium and Germany as producers of amphetamine has been declining.

European amphetamine precursor seizures increased somewhat over 2005. During 2006, most P-2-P precursor seizures were reported in Poland (1,085 litres), Denmark (590 litres), the Russian Federation (402 litres), Turkey (197 litres), the Netherlands (174 litres), Finland (70 litres), Estonia (51 litres), Bulgaria (32 litres), and Lithuania (4 litres). Over the last five years the Netherlands reported the largest total P-2-P seizures in Europe; but like most ATS precursors, these seizures have been declining (from 18,238 litres in 2001 to 6,280 litres in 2004 and 174 litres in 2006). Europe as a whole accounted for 92% of global P-2-P seizures in 2006. No P-2-P was reported seized in Asia, a notable producer region.

Countries in the Near and Middle East and North Africa, while generally not producers of ATS, are greatly affected by its manufacture. Saudi Arabia and neighbouring countries are significant markets for the consumption of '*Captagon*'.[60] Illicit Captagon, which is believed to be mainly amphetamine, is smuggled to the countries of the Near and Middle East usually via Turkey, Syria and Jordan.[61] Beginning in 2004, large quantities were reported seized by Saudi Arabia. The largest was 12.1 mt in 2006. This is equivalent to the sum of all UK seizures – the biggest amphetamine market in Europe – from 2000 to 2006. It is believed that much of the amphetamine is sourced from clandestine laboratories in Bulgaria and Turkey. Saudi Arabia also reported large methamphetamine seizures (216 kg). This is unprecedented for the region and could signal the development of new routes and destinations for this drug. Declining amounts of an amphetamine-type stimulant, locally known as '*Maxiton Forte*' are found on the illicit drug market of Egypt. Maxiton Forte used to be a pharmaceutical preparation of dexamfetamine, which used to be produced in Europe (France). This production, however, has long been stopped. There are indications that Maxiton Forte today is actually methamphetamine, which is produced in clandestine laboratories but marketed under the name Maxiton Forte. Due *inter alia* to the lack of forensic reporting, it is not clear where this production is actually taking place, the manufacturing techniques and precursors used, or the purity of the end product.

Global ecstasy manufacture is shifting as the importance of Europe as the main ecstasy manufacture area continues to decline

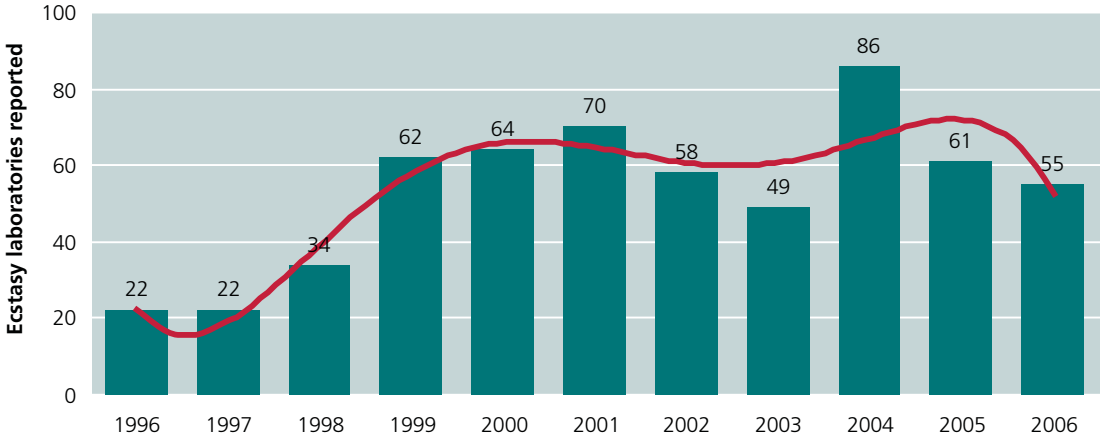
The number of dismantled and reported ecstasy producing laboratories in 2006 was 55 (in just six countries). This is a 10% decline over (upwardly revised)

59 Information based on 237 mentions on the origin of domestic amphetamine seizures from 47 countries over the 2002-2006 period.

60 Originally the trade name for fenetylline, a metabolic precursor for amphetamine.

61 Limited forensics reports do not allow for the identification of the specific substances in the Captagon.

Fig. 131: Number of 'ecstasy group' laboratories worldwide, reported to UNODC (all sizes): 1996-2006



Source: UNODC, Annual Reports Questionnaire Data/DELTA.

2005 levels (61 laboratories). The largest numbers of dismantled ecstasy laboratories were reported from the USA (19) and Canada (16), followed by the Netherlands (8) and Australia (7). In addition, some ecstasy laboratories were dismantled in Germany, China and Hong Kong, SAR.

Between 1996 and 2006, 25 countries reported the dismantling of a total of 581 ecstasy laboratories to UNODC. The largest numbers of ecstasy laboratories were reported in the Netherlands (161), followed by the USA (139), Canada (104), Australia (41), Belgium (34), UK (18), and Germany (17). The number of laboratories discovered in the Netherlands and Belgium peaked in 2000 and has since declined; Germany's manufacture has been consistently low and the UK has not reported an ecstasy laboratory to UNODC since 2002. At the same time, detections in the USA, Canada and Australia have increased.

Beginning in 2003, laboratories were increasingly reported in North America (USA and Canada) and decreasingly in Europe (specifically the Netherlands and Belgium).[62] Progressively, more ecstasy is being produced in large scale laboratories for the domestic market within North America. Organized criminal groups, operating out of Canada, have become active in the manufacture of ecstasy and are supplying the USA and Australian markets. In 2006, all of the ecstasy laboratories identified in Canada were of the super-lab variety.[63]

Between 2002 and 2006, States Members reported that the origin of most ecstasy seizures was: the Netherlands (143 or 42%), Belgium (40 or 12%), Germany (19 or 6%), the UK (4% and Canada (11 or 3%), followed by Poland, Estonia, South Africa, Bulgaria and the USA.[64] Europe as a whole accounts for 84% of such mentions, however, as more than half of all countries reporting on the origin of ecstasy to UNODC were European (37 out 69) these figures have a bias. Countries outside Europe which were frequently mentioned as source countries for ecstasy manufacture include Canada, South Africa, USA, China as well as Hong Kong SAR of China.

Over the period of 2001 to 2005, European seizures of ecstasy precursors (expressed in potential MDMA manufacture equivalents) accounted for 60% of global ecstasy precursor seizures. In 2005, this proportion fell to 32% and, in 2006, Europe accounted for a mere 16%. North America accounted for 84% of the seizures of ecstasy precursors, almost entirely 3,4-MDP-2-P (PMK) seized in Canada. According to reports, all of the PMK seized in Canada has been sourced from China, typically via marine shipment.[65] This could be a further indication that the importance of Europe as an ecstasy production site is declining.

ATS markets in Africa and South-America remain comparatively modest

While domestic production of ATS is very limited in South America, Africa (except South Africa), and Near

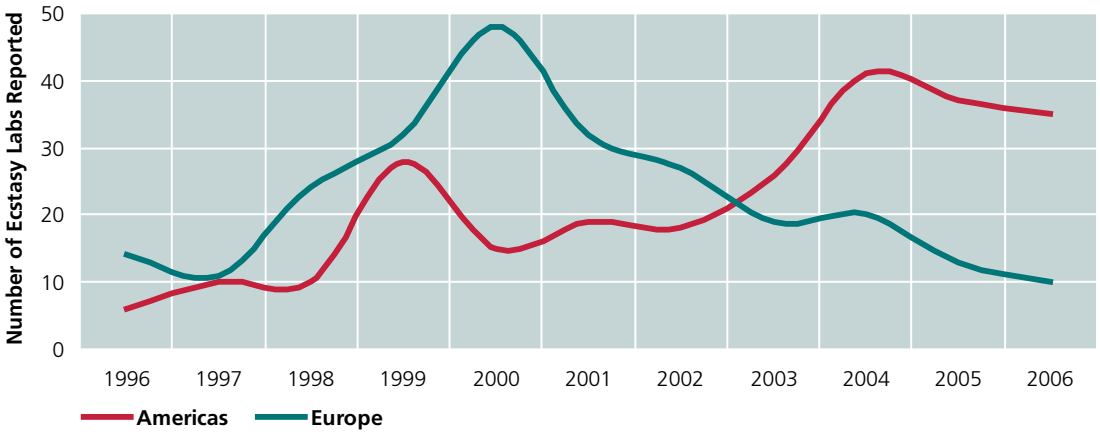
62 A trend towards falling levels of ecstasy production in Europe has been also identified by EUROPOL. (See EUROPOL, *Production and Trafficking of Synthetic Drugs and Precursors*, The Hague, 1 March 2007.

63 International Narcotics Control Board, 2007 Annual Report (March 2008); US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008).

64 Information based on 333 mentions on the origin of domestic ecstasy seizures from 69 countries over the 2002- 2006 period.

65 Royal Canadian Mounted Police (RCMP): *Drug Situation Report 2006*; National Drug Intelligence Center, *National Drug Threat Assessment 2008, Nov.,2007.*

Fig. 132: Number of "ecstasy group" laboratories in the Americas and Europe, reported to UNODC (all sizes): 1996-2006



Source: UNODC, Annual Reports Questionnaire Data/DELTA.

and Middle East, drug use surveys conducted in South America and Africa suggest that consumption is far from negligible. The defined daily doses (per 1,000 inhabitants) for legally produced Schedule-IV stimulants in the Americas amounted to nearly 11 over the 2004-2006 period: up from around 7 over the 2000-2002 period, as compared to between 1 and 2 currently in Europe or Asia. In 2006, Argentina and Brazil had the first and third highest calculated rate of use of Schedule-IV stimulants: nearly 17 and 10 daily doses per 1,000, respectively.[66]

66 International Narcotics Control Board, *Psychotropic Substances 2007: Statistics for 2006*, New York 2008.

1.5.3 Trafficking

Global ATS seizures increase

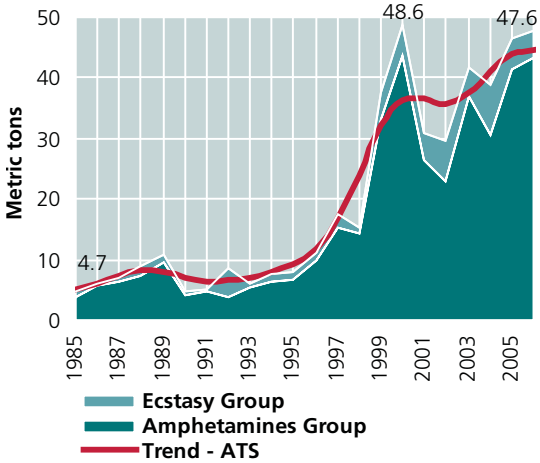
Seizures of amphetamine-type stimulant (ATS) increased again in 2006, reaching 47.6 mt, just short of their 2000 peak.[1] A total of 99 countries and territories reported seizures of ATS to UNODC in 2006, a number similar to reports received in 2000 (96), and much higher than in 1985 (40).

While trafficking in ATS end-products remains primarily *intra*-regional, there is greater evidence which suggests that increased *inter*-regional cooperation and trafficking are occurring.[2] Trafficking in ATS precursor chemicals continues to be predominantly *inter*-regional – with the majority of precursors trafficked out of East, and South Asia. Seizure data of ATS end-products provides interesting insights into the relative size and dynamics of the various sub-markets.[3]

Amphetamines account for the majority of global ATS seizures

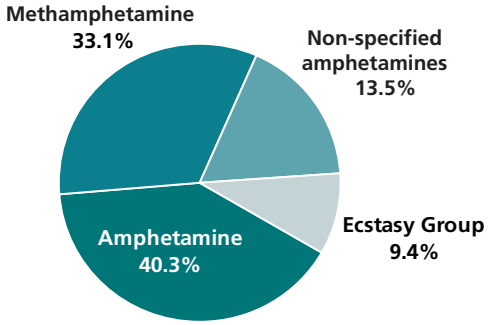
The amphetamines group constituted 91% of ATS seizures in 2006. The ecstasy group accounted for the remaining 9%.[4] For the first time since data were tracked, growth in amphetamine seizures outpaced that of methamphetamine. Of the 47.6 mt reported seized in 2006, amphetamine accounted for 40%, methamphetamine for 33%, and non-specified amphetamines for 14%.[5]

Fig. 133: Seizure trend of amphetamine-type stimulants (ATS): 1985 - 2006



Source: UNODC, Annual Report Questionnaire Data/DELTA; and World Customs Organization (WCO), Customs and Drugs Report 2006 (June 2007).

Fig. 134: ATS seizures, by substance type: 2006 (47.6 mt)



Source: UNODC, Annual Report Questionnaire Data / DELTA

1 Seizures reported in kilograms, litres and units are converted into kilogram equivalents: a unit (pill) of ecstasy was assumed to contain on average 100 mg of active ingredient (MDMA); a unit of amphetamine/ methamphetamine was assumed to contain 30 mg of active ingredient; a litre was assumed to equal a kilogram. Until 1999 'other hallucinogens' were included in data for ecstasy, but the proportion of 'ecstasy' in the total seems to have exceeded 90% in most years (2000-2006: 90%-95%).

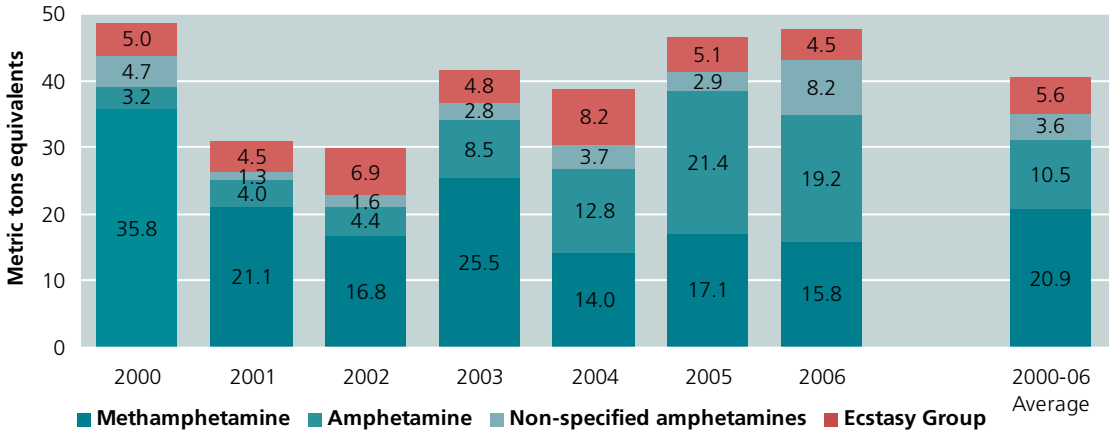
2 International Narcotics Control Board, *2007 Annual Report* (March 2008); US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008); Royal Canadian Mounted Police (RCMP): *Drug Situation Report 2006*.

3 Drug and precursor seizure data are subject to change for a variety of reasons, such as new or late data being added or revisions in data already provided by States Members. For example, new data related to drug seizures from Taiwan, Province of China, between 2000 and 2006 were added which have increased seizure totals several metric tons in a variety of drugs classes (i.e., ATS, cannabis, and heroin). Precursor seizure data sourced from INCB are also often updated in the following year (e.g., Mexico failed to provide any Form D seizure data for 2006 to INCB). Additionally, seizure data reported in what appeared to be thousands of litres of "*Maxiton Forte*" from Egypt, were in fact thousands of cubic centimetres, significantly reducing seizure totals between 2001 and 2006. All data reported in trafficking reflect the most up-to-date and accurate information available at printing.

4 The "ecstasy group" includes the substances MDMA, MDA and MDEA/MDE, although more than 90% is reported as MDMA.

5 The category of *'non-specified amphetamines'* comprises stimulants where the authorities were unable to forensically identify and report specific substances composition such as. In addition Methcathinone (ephedrone), Captagon (originally fenetylline, today probably amphetamines) and Maxiton Forte (originally dexamfetamine, today probably methamphetamine) are included in this category.

Fig. 135: Reported seizures of ATS, by substance type: 2000 - 2006



Source: UNODC, Annual Report Questionnaire Data/DELTA.

Between 2000 and 2006, the average amount of ATS seized annually was 41 mt, of this about half was methamphetamine. Since 2002, total reported seizures of ATS have been increasing. These increases in seizures (types/weight) are primarily a result of increases in reporting. Specifically, reports of large customs interceptions of amphetamine (termed "*Captagon*") made in the Near and Middle East since 2004.[6]

In 2006, the majority of ATS seizures worldwide occured primarily in four regions. Patterns were as follows:

- Near and Middle East (32%)
  – primarily amphetamine;
- East and South-East Asia (26%)
  – primarily methamphetamine;
- North America (17%)
  – primarily methamphetamine and ecstasy; and
- West and Central Europe (16%)
  – primarily amphetamine and ecstasy.

Oceania and Southern Europe each reported 4% of the ATS seizure total. Three of the four regions above are also major manufacturing areas. The exception is the Near and Middle East where no clandestine manufacture has been reported to UNODC. The region is thought to be a transit point for where major diversions of precursors of amphetamine-type stimulants are occurring.[7]

The largest national ATS seizures in 2006 were reported from Saudi Arabia (26%), the USA (15%), China (13%), Myanmar (6%), the UK (5%), Oman and the Netherlands (4%), and Australia and Indonesia (3% each).[8] In 2006, the World Customs Organization reported 12.1 mt of amphetamine (*Captagon*) seized in Saudi Arabia, including a single seizure (originating from Turkey) of more than two tons which was intercepted at the Jordanian and Saudi Arabian border. In addition, the first significant seizure of methamphetamine reported in the region to date, 216 kg of methamphetamine, was reported in Saudi Arabia.[9] Oman reported more than two mt of non-specified amphetamines (*Captagon*) – the most significant seizure of amphetamines in this region, outside of Saudi Arabia.

The USA continues to report substantial seizures of methamphetamines originating from the US/Mexico border. China reported significant seizures of methamphetamine, and Myanmar reported more than 2.2 mt of non-specified amphetamines (most likely methamphetamines).[10] The UK primarily reported amphetamine seizures, while the Netherlands reported a mix of amphetamine and ecstasy. Neither reported methamphetamine seizures.

Trafficking in methamphetamine

Main methamphetamine markets remain East and South-East Asia and North America

While the amount of methamphetamine seized in 2006

6 Captagon is typically recorded as a non-specified amphetamine since tablet content is changing and is rarely forensically reported. However, data provided in the World Customs Organization's, *Customs and Drugs Report 2006* (June 2007), identified Captagon seized in Saudi Arabia as amphetamine.

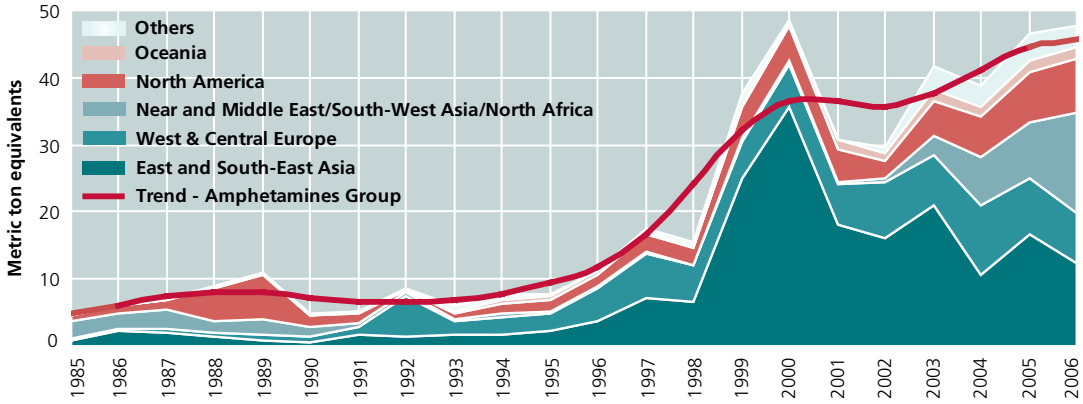
7 International Narcotics Control Board, *2007 Annual Report* (March 2008).

8 Data for the UK reported in the 2006 ARQ refers to the calendar year 2005.

9 World Customs Organization (WCO), *Customs and Drugs Report 2006* (June 2007).

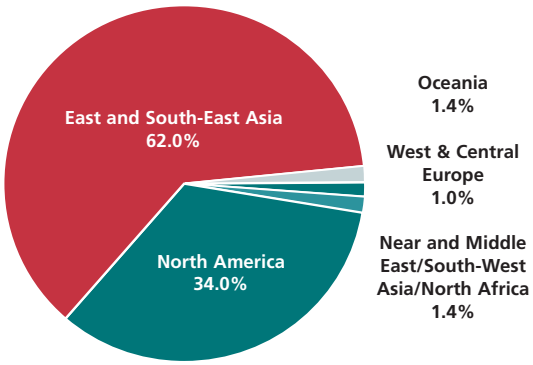
10 Lacking forensic reports, the assumption regionally is methamphetamines.

Fig. 136: Global ATS seizures by region in metric ton equivalents: 1985 - 2006



Source: UNODC, Annual Report Questionnaire Data/DELTA; World Customs Organization (WCO), Customs and Drugs Report 2006 (June 2007).

Fig. 137: Regional breakdown of methamphetamine seizures: 2006 (15.8 mt)



Source: UNODC, Annual Reports Questionnaire Data/DELTA

(15.8 mt) was roughly half that seized in 2000, the number of countries reporting seizures has increased over the same period by more than 50%, to 49 countries. This includes several countries not previously reporting methamphetamine seizures to UNODC such as Saudi Arabia, Georgia, and Niger. This appears to indicate that methamphetamine trafficking is expanding intra- as well as inter- regionally.

In 2006, 96% of methamphetamine seizures reported were dominated by East and South-East Asia and North America. In comparison to 2005, the regions of East and South-East Asia and North America reported 99% of the global seizures of methamphetamine. Proportionally low seizures were reported in Oceania and Europe in 2006, however, the weight/amount of seizures is getting larger on average. Over the 2000-2006 period seizures in Oceania increased more than 20-fold and European seizures rose more than 6-fold.

Of the top 10 countries which reported seizures between 2000-2006, seven come from East and South-East Asia, two from North America, and one from Oceania. The largest methamphetamine seizures at the global level during this period were made by China, Thailand, USA, and Taiwan, Prov. of China. China's seizures range from 3 mt to 21 mt (the highest recorded seizure ever), but have more recently hovered around 6 mt. Thailand's seizures have been declining since their peak of 10 mt in 2000, due to an increase in law enforcement and other controls.[11]

Seizures in the USA peaked in 2005 and have declined following changes in legislation controlling precursor chemicals (specifically over-the-counter pharmaceutical preparations that contained pseudoephedrine). Methamphetamine seizures in Taiwan, Province of China, peaked at 4 mt in 2003, and have declined since. However, in 2005, more than 2.2 mt of semi-processed "*amphetamine,*" possibly a methamphetamine intermediate, were reported seized in the country.[12]

Mexico and Myanmar, both major producer and trafficking countries for methamphetamines, consistently report seizure amounts of one mt or less. Indonesia, which reported nominal methamphetamine seizure until 2005 (0.4 mt), seized 1.3 mt in 2006. Preliminary reports suggest that significant amounts were also seized in early 2008.

11 It is important to note that some countries (e.g., in South-East Asia) may inconsistently distinguish between methamphetamine pills, powder, and crystal forms. While chemically the same, some report totals as the same drug, while others do not.

12 Forensics data were unavailable.

Table 11: Top Countries (rank ordered) in methamphetamine seizures (in metric tons): 2000 - 2006

Country (Top 10)	2000	2001	2002	2003	2004	2005	2006	Total
China	20.9	4.8	3.2	5.8	2.7	6.8	6.1	50.3
Thailand	10.1	8.3	8.6	6.5	2.1	0.8	0.5	37.0
USA	0.0	2.9	1.1	3.9	3.1	5.1	4.5	20.6
Taiwan, Prov. of China	0.8	1.2	1.3	4.0	3.2	1.7	0.2	12.4
Philippines	1.0	1.7	0.9	3.1	0.8	0.1	0.8	8.4
Mexico	0.6	0.4	0.5	0.7	1.0	0.9	0.8	4.8
Myanmar	0.8	1.0	0.4	0.1	0.0	0.4	0.6	3.3
Japan	1.0	0.4	0.4	0.5	0.5	0.1	0.1	3.2
Indonesia	0.0	0.0	0.0	0.0	0.0	0.4	1.3	1.7
Australia	0.0	0.0	0.0	0.5	0.2	0.1	0.1	1.0
Subtotal	**35.3**	**20.7**	**16.5**	**25.2**	**13.6**	**16.4**	**14.9**	**142.6**
Percent of all seizures	98.8%	98.2%	98.4%	98.6%	97.0%	96.0%	94.6%	

Source: UNODC, Annual Reports Questionnaire Data/DELTA

The decline in the percentage of global seizures in the top 10 countries reflects the increasing spread of manufacture and trafficking. For example, in 2006 Saudi Arabia reported its first seizure of methamphetamine, at 216 kg, it was the largest in the region.

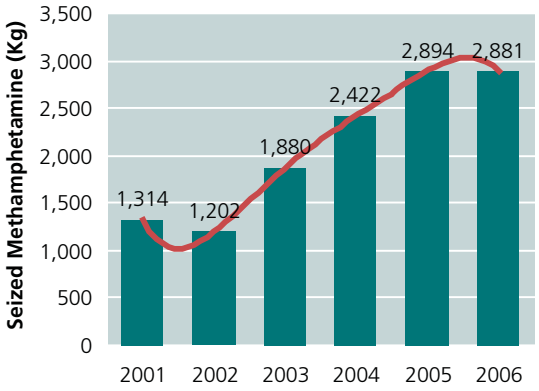
Methamphetamine East and South-East Asia may be shifting

As more national and international controls are put in place – on precursor chemicals in particular - the market appears to be shifting gradually to areas where control regimes are weak, leading to an increase in both intra-, and inter-regional trafficking. There is increasing evidence to support that this may be occurring in Asia and between Asia, Oceania, North America and, to a lesser extent, Europe.

Important trafficking routes in Asia are:

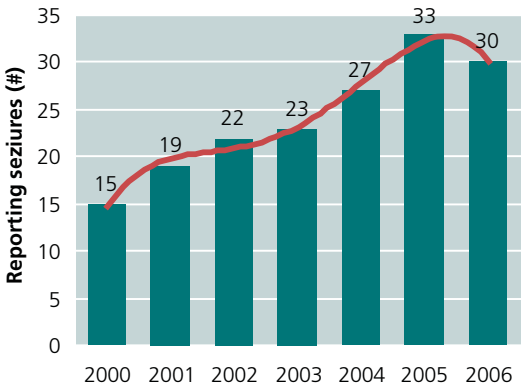
- From Myanmar to China (Yunnan Province); trafficking along this route has increased. In 2006, the Chinese authorities reported some 55% of their total methamphetamine seizures as having taken place in Yunnan province (a transit point to the rest of the country and abroad);
- From China (Yunnan Province) to the Guangxi, Guangdong, Fujian provinces, and Hong Kong SAR of China for export to Taiwan, Province of China, Japan, Indonesia, and the Philippines;
- From Myanmar to Thailand, either directly or indirectly via Lao PDR or Cambodia. Although traditionally only *'yaba'* (methamphetamine tablets) originated in Myanmar, over the last few years reports also show that there has been 'ice' (crystal methamphetamine) production originating in Myanmar;
- Smaller amounts leave Myanmar for consumption in the north-eastern provinces of India and Bangladesh;
- Shipments from Myanmar via Thailand to Malaysia, Indonesia, Singapore and Brunei Darussalam;
- Lao PDR (Vientiane) is a significant transit point to Thailand via Nong Khai and to Bangkok; also to Lao PDR (Pakse) and expanding transit point to Cambodia via Stueng Treng and Presh Vihar on to Phnom Penh;
- Cambodia (Phnom Penh) is a staging point for transit to Poipet and on to Thailand (Bangkok); also to South Viet Nam (Ho Chi Minh);
- From China to Hong Kong SAR of China, the Philippines, Malaysia, Republic of Korea, Taiwan province of China and/or Japan;
- From Hong Kong SAR of China to Japan, Australia, New Zealand, Guam (USA), and Thailand;
- From the Philippines to the Republic of Korea, Malaysia, Brunei Darussalam, Taiwan province of China, Japan, Australia, New Zealand, the USA (including Guam) and Canada;
- From Thailand to Malaysia, Taiwan province of China, the Republic of Korea as well as to various other international markets;
- Ephedrine and pseudoephedrine from India to Canada and Myanmar; also to Malaysia possibly via Sri Lanka;
- Ephedrine and pseudoephedrine from West Asian countries (e.g., The Islamic Republic of Iran)

Fig. 138: US-Mexico border seizures of methamphetamine: 2001-2006



Source: US National Drug Intelligence Center, *National Methamphetamine Threat Assessment 2008 (Dec. 2007)*

Fig. 139: Countries reporting seizures of methamphetamine: 2000-2006 (excludes North America and East and South-East Asia)



Source: UNODC, Annual Reports Questionnaire data

to Somalia and the Democratic Republic of the Congo and on to North America or Oceania.

In 2005, the authorities of the Republic of Korea reported that 70% of seized methamphetamine originated in China. By 2006 nearly all (99%) seized methamphetamine originated in China.[13]

In North America trafficking remains predominately intra regional

Most methamphetamine-related trafficking in North America takes place (i) within the USA, (ii) from Mexico to the USA, and to a lesser extent (iii) from Canada to the USA. While there is increasing smuggling of methamphetamine from Canada to the USA, the most significant problem remains the methamphetamine trafficked to the United States from Mexican super-labs.[14] According to the Mexican authorities, most of the methamphetamine produced in Mexico is for export to the USA. Between 2001 and 2006, the amounts of methamphetamine seized by the US authorities along the south-west border with Mexico increased from 1.3 tons to 2.8 tons.[15] This represented about 75% of all reported US seizures in 2006. This significant increase followed the tightening of precursor chemical control in Canada and in the USA. Organized criminal groups in Mexico have expanded their methamphetamine distribution networks and consolidated much of the previously independent methamphetamine traffickers in the Great Lakes, Pacific, Southeast, Southwest, and West Central Regions. They have also introduced highly addictive crystal methamphetamine into these markets.[16]

Preliminary reports for 2007 suggest substantial declines in seizures on the USA/Mexico boarder, consistent with increased control of the Mexican authorities on domestic production and trafficking of methamphetamine. Among other things, Mexico has drastically reduced the import of methamphetamine precursor chemicals and is moving to ban all preparations containing ephedrine and pseudoephedrine in 2009.[17]

Inter-regional methamphetamine trafficking is reported from other regions

The number of countries reporting seizures of methamphetamine increased from 15 in 2000 to 30 in 2006, indicating that methamphetamine is spreading in geographical terms. While most of this expansion has occurred in Europe, several new counties reporting first-time methamphetamine seizures were identified. For instance, Saudi Arabia, Georgia, and Niger all reported seizures (some very large) for the first time in 2006.[18] According to the World Customs Organization, in 2006, there were two seizures totalling 216 kg of methamphetamine in Saudi Arabia.[19] This was the first significant seizure in the region. Neither source country or

13 UNODC, Annual Reports Questionnaire.

14 A 'super lab' is defined by the US authorities as a clandestine laboratory which can produce more than 10 pounds (i.e. more than 5 kg) of methamphetamine over a production cycle. US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008).

15 National Drug Intelligence Center, *National Methamphetamine Threat Assessment 2008 (Dec. 2007).*

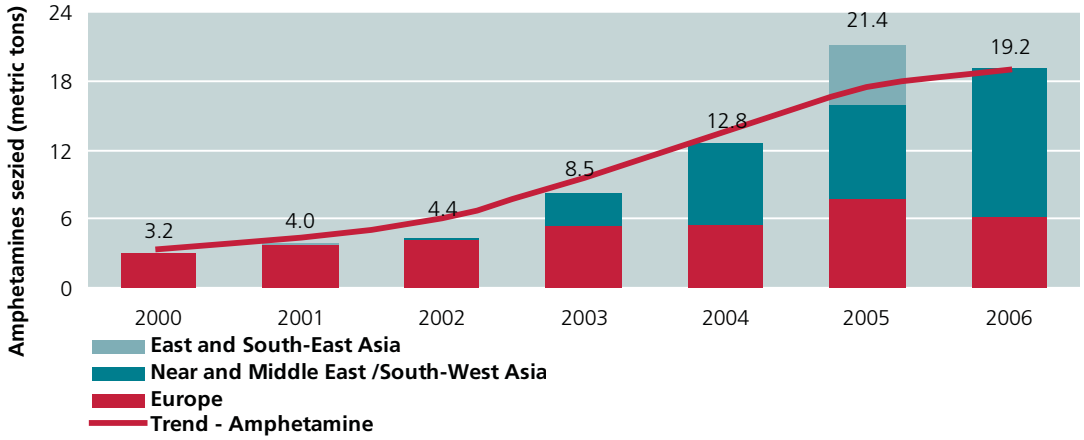
16 National Drug Intelligence Center, *2008 National Drug Threat*, October 2007.

17 International Narcotics Control Board, *2007 Annual Report* (March 2008); US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008).

18 In 2005 Argentina, Dominican Republic, Portugal, and Ukraine reported first-time methamphetamine seizures to UNODC.

19 World Customs Organization, *Customs and Drugs Report 2006* (June 2007).

Fig. 140: Global amphetamine seizures: 2000-2006



Source: UNODC, Annual Reports Questionnaire Data; and World Customs Organization (WCO), *Customs and Drugs Report 2006* (June 2007).

specific forensics were reported.[20]

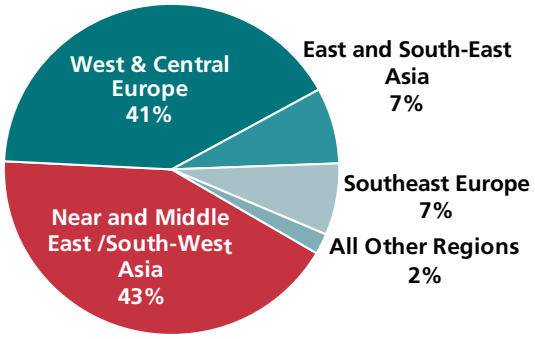
Trafficking in amphetamine

Amphetamine trafficking continues to be concentrated in Europe – but seizures rise sharply in the Near and Middle East

In 2006, amphetamine seizures were 19.2 mt, with the Near and Middle East /South-West Asia accounting for the bulk (67%). Europe accounts for 32%, with Western and Central Europe at 27% and South-East Europe at 5%. Small amounts (0.6%) were also reported in South America, Oceania, and East and South-East Asia. Several new first-time reports of amphetamine seizures were received, including Iran (IR), and Nepal. Amphetamine seizures from 2000 to 2006 increased 500%, fuelled by the increase in the Near and Middle East/South-West Asia.

Over the 2000-2006 period, some 57% of the global amphetamine seizures occurred in Europe, mainly in West and Central Europe (48%) and in Southeast Europe (8%). The Near and Middle East/South-West Asia region accounted for 33% although amounts in this area may be underreported.[21] East and South-East Asia accounted for 7% – all reported in 2005.[22]

Fig. 141: Distribution of amphetamine seizures, by region: 2000-2006 (10.5 mt avg. per year)



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Amphetamine production and trafficking are concentrated in Europe, making Europe's amphetamine seizures a reasonable proxy for global amphetamine seizures. Amphetamine seizures increased between 1980 and 1997, before falling towards the end of the 1990s. Between 2000 and 2006, European amphetamine seizures more than doubled.

Between 2000 and 2006, the top 10 European countries which reported seized amphetamine accounted for 92% of all European seizures and 45% of global seizures. Since 2000, the UK has seized 12 mt of amphetamines or 1/3rd of the European total. The next largest seizures in Europe came from the Netherlands with 15%, followed closely by Bulgaria at 13% of all European seizures.

20 Pakistan reported a 16 kg seizure in 2004.

21 Significant seizure levels began in 2001. Due to a lack of forensics reporting, captagon seizures are typically recorded as *non-specified amphetamines*, unless specifically identified as amphetamines. In 2006, the World Customs Organization reported a 12.1 mt interception of captagon in Saudi Arabia, which the report identified as amphetamine.

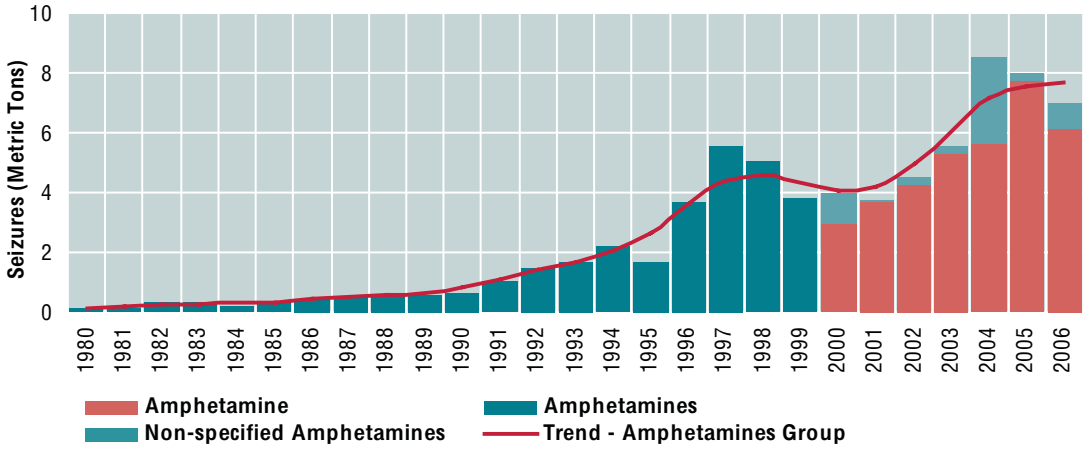
22 This region is not known for amphetamine production, and in 2005 China and Taiwan, Province of China, both reported large isolated seizures of amphetamines (5.2 mt total). Regional experts believe that these are likely methamphetamine which has been recorded as amphetamine due to a lack of forensics reporting. Thus, regional amounts of this specific substance may be overstated.

Table 12: Top European Countries (rank ordered) in amphetamine seizures (in metric tons): 2000-2006

Country (Top 10)	2000	2001	2002	2003	2004	2005	2006	Total
United Kingdom	1.77	1.72	1.41	1.65	1.39	2.04	2.04	12.01
Netherlands		0.58	0.48	0.88	0.59	2.03	0.63	5.19
Bulgaria	0.21	0.06	0.18	0.59	1.46	1.12	0.88	4.50
Germany	0.27	0.26	0.36	0.48	0.56	0.67	0.71	3.32
Sweden	0.10	0.25	0.33	0.33	0.44	0.42	0.42	2.28
Poland	0.14	0.19	0.16	0.19	0.24	0.46	0.33	1.72
Norway	0.09	0.09	0.21	0.22	0.23	0.12	0.32	1.28
Belgium	0.08	0.08	0.50	0.21		0.18	0.12	1.15
Finland	0.08	0.14	0.13	0.11	0.10	0.11	0.13	0.80
France		0.06	0.15	0.27	0.08	0.11	0.08	0.75
Subtotal	**2.7**	**3.4**	**3.9**	**4.9**	**5.1**	**7.3**	**5.7**	**33.0**
Percent of all seizures	86.7%	86.3%	88.6%	84.7%	82.5%	53.5%	82.1%	

Source: UNODC, Annual Reports Questionnaire Data/DELTA

Fig. 142: Amphetamines (includes non-specified amphetamines) seized in Europe: 1980-2006



Source: UNODC, Annual Reports Questionnaire Data.

Non-specified amphetamines in Europe are more likely to be amphetamine-based than methamphetamine-based.[23] Seizures have declined slightly since their 2004 peak, consistent with reports of shortages in Europe of P-2-P[24], its main precursor. This decline may also reflect indications of amphetamine (Captagon) manufacture shifting towards the Near and Middle East, the largest consumer market for captagon. The discovery of several labs in Turkey, some of which were on the border with Syria, could have necessitated a new source of supply.

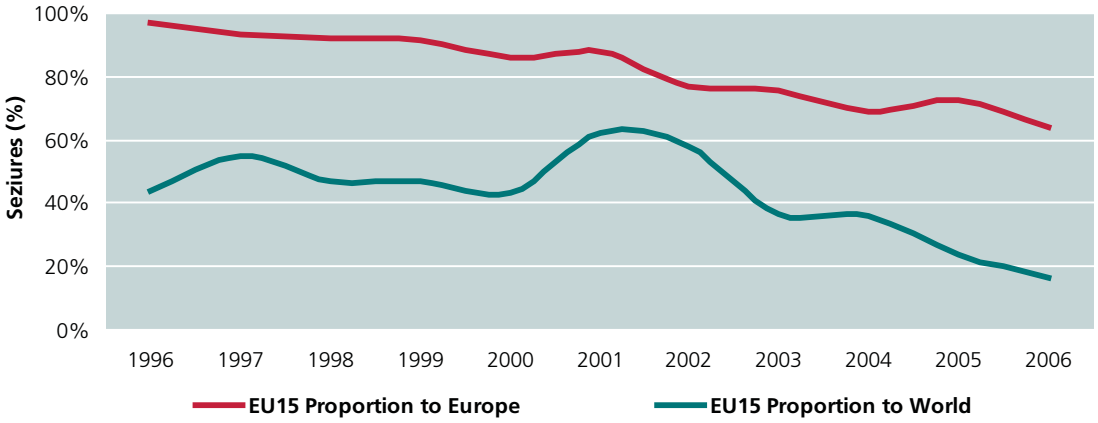
One of the more interesting trends within Europe has been the continuing shift of production and trafficking in amphetamine to both the new-EU and non-EU States Members. In 1996, the EU-15 countries accounted for 97% of all European amphetamine seizures.[25] This declined to 65% in 2006. The data show similar declines when compared to the rest of the world, as greater amounts of amphetamines are seized in the Near and Middle East region.

23 It is reasonable to assumed that the bulk of non-specified amphetamines in Europe were actually amphetamine, since little methamphetamine is reported in Europe save for the Czech Republic and it surrounds. Reported in metric tons from converted kilogram equivalents- assuming a dose/unit to be equivalent to 30 milligrams. Excludes ecstasy seizures.

24 EUROPOL, *Synthetic Drugs and Precursors*, presentation given by the EUROPOL Drug Unit at the Europe-Asia Conference on Synthetic Drugs and their Precursors, Paris, 6-7 March 2007.

25 EU-15 refers to the 15 countries in the European Union before the expansion on 1 May 2004. These include Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.

Fig. 143: Proportion of amphetamine seizures in EU-15 countries versus all European countries and global total: 1996 – 2006



Source: UNODC, Annual Reports Questionnaire Data.

Trafficking in the amphetamines group

Overall amphetamines seizures remain concentrated in South-East Asia, North America and Europe

Many countries continue to have difficulties with forensic identification and reporting of seized substances. Therefore, it is helpful to examine synthetic stimulants within the broader amphetamines group (i.e., amphetamine, methamphetamine, and non-specified amphetamine). Within this context seizure statistics suggest that global trafficking in amphetamines increased strongly in the mid 1990s, peaking in 2000. Seizures have been climbing again since 2002, driven largely by reports from the Near and Middle East.

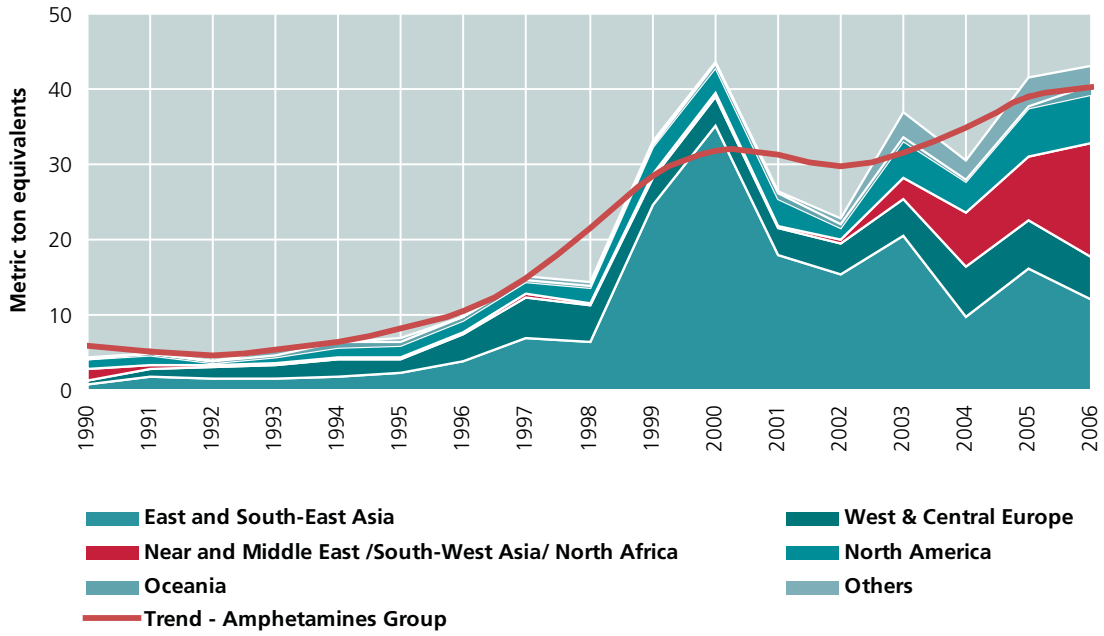
Global seizures increased again in 2006, almost reaching 2000 levels. Seizure data suggest that the dominance of the South East Asian market, historically the main amphetamines group market, may be in decline. In 2000, South-East Asia accounted for 81% of the 43.6 mt of amphetamines seized globally. By 2006, that amount dropped to 28% (12 mt), with rising seizures in the Near and Middle East (15 mt or 35%). North America accounted for (15%) and West and Central Europe (13%) of the 2006 total.

With significant seizures reported in the Near and Middle East

The extremely large amount of seizures reported from the Near and Middle East region points to the need for further analysis on sources, forensic information and destinations. Saudi Arabia reported a seizure of 12.1 mt in 2006, equivalent to the sum of all UK seizures, the biggest amphetamine market in Europe, from 2000 to 2006. Amphetamine tablets for the Near and Middle East have typically been produced in Southeast Europe (Bulgaria and Turkey) and trafficked and marketed as *Captagon* to Near and Middle East countries. Saudi Arabia is the largest such market in the region. Captagon typically transits over land through Turkey, Syria, and Jordan before arriving in Saudi Arabia.[26] The growing seizure volume appears inconsistent given the small number of clandestine laboratories reported by authorities in Bulgaria (3) and Turkey (12) in 2006. Additionally, Oman reported seizing more than two mt of non-specified amphetamines (i.e., Captagon) destined for Saudi Arabia – the second most significant seizure of amphetamines in this region. The trafficking of large volumes of methamphetamines through the region to an as yet undetermined market is cause for concern.

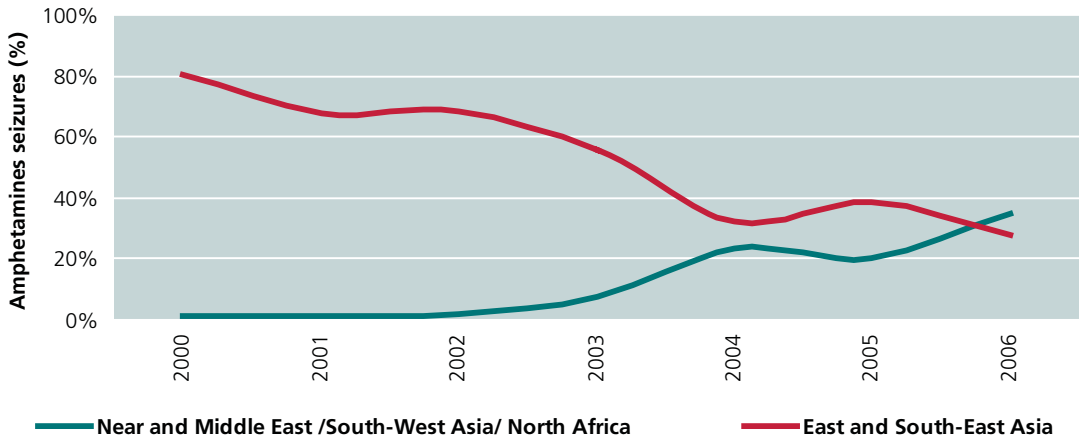
26 ARQ; World Customs Organization (WCO), *Customs and Drugs Report 2006* (June 2007). Additionally, there are reports of Saudi Arabia seizures originating from the United Arab Emirates and Lebanon.

Fig. 144: Global seizures of the amphetamines group, by region: 1985 - 2006



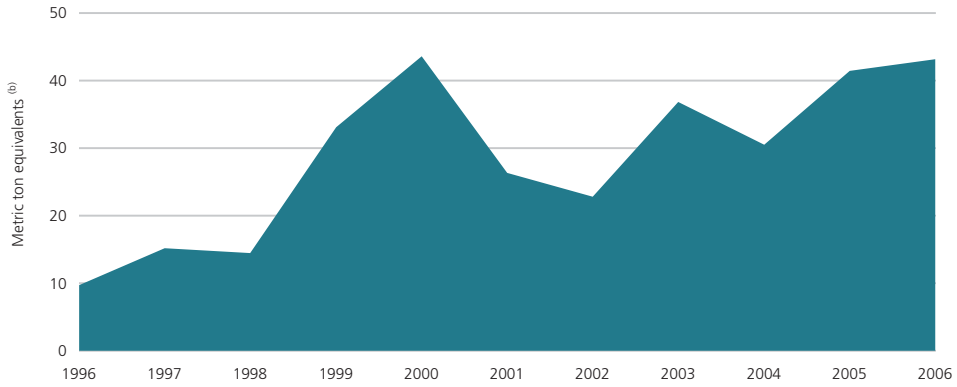
Source: UNODC, Annual Report Questionnaire Data/DELTA; and World Customs Organization (WCO), *Customs and Drugs Report 2006* (June 2007).

Fig. 145: Regional shifts in amphetamines group seizures: 2000 - 2006



Source: UNODC, Annual Report Questionnaire Data/DELTA; and World Customs Organization (WCO), *Customs and Drugs Report 2006* (June 2007).

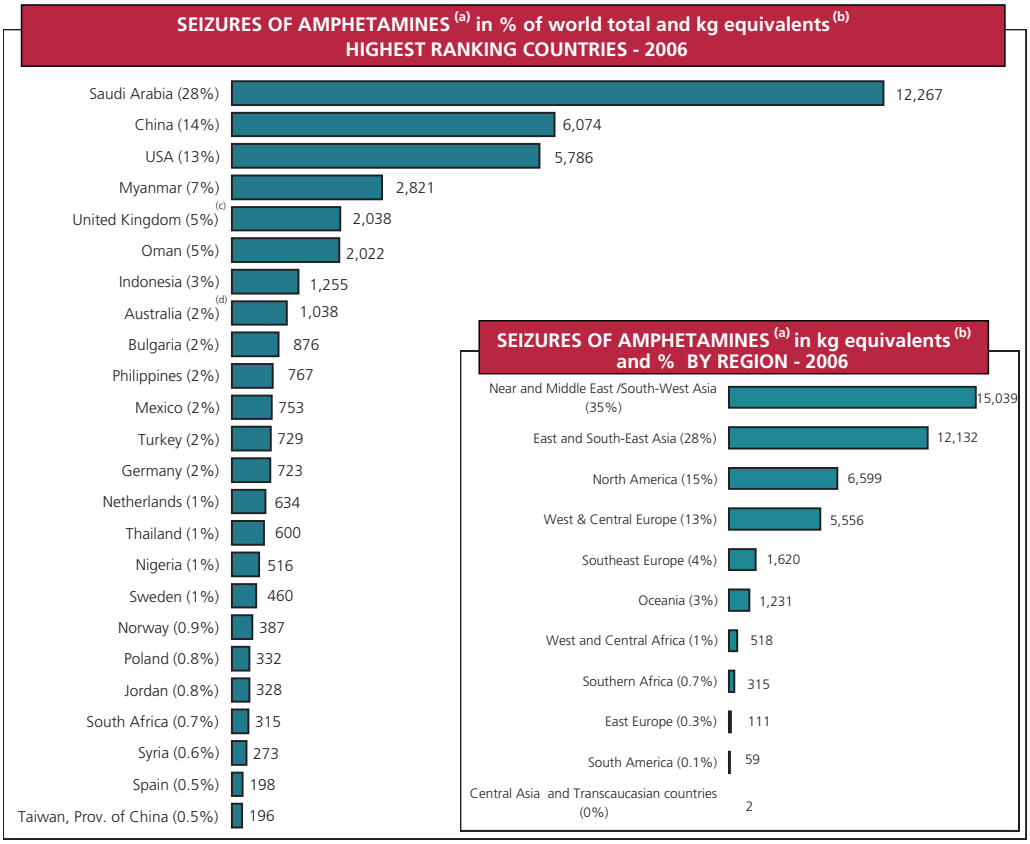
Fig. 146: Global seizures of amphetamines[a], 1996 - 2006



[a] Amphetamine, methamphetamine and related stimulants.

[b] 1 unit is assumed to be equal to 30 mg; 1 litre is assumed to be equal to 1 kg.

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Metric ton equivalents[e]	10	15	14	33	44	26	23	37	30	41	43



[a] Amphetamine, methamphetamine and related stimulants (excludes ecstasy group substances).

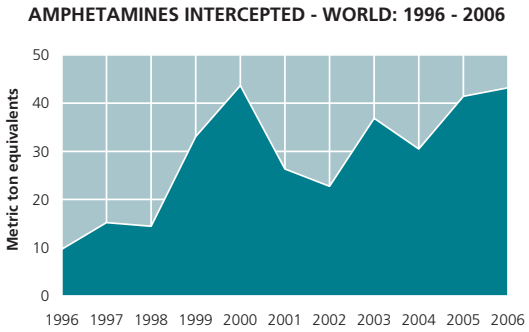
[b] 1 unit is assumed to be equal to 30 mg; 1 litre is assumed to be equal to 1 kg.

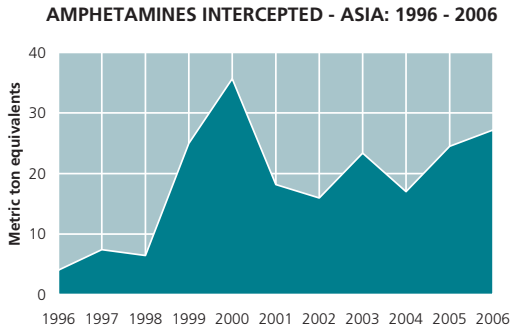
[c] Data refer to 2005 England and Wales only.

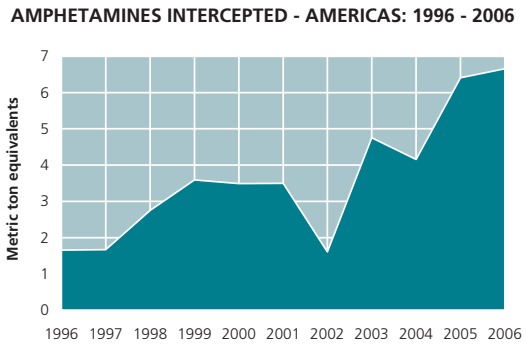
[d] Total seizures reported by national as well as state & territory law enforcement agencies which may result in double counting.

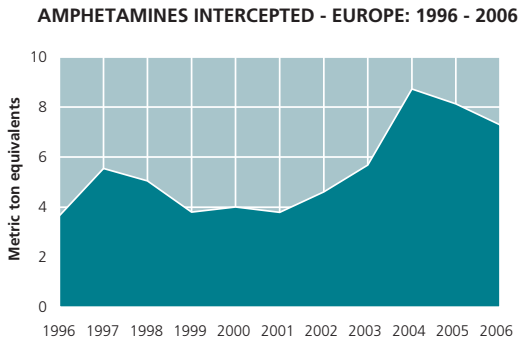
[e] Total metric ton seizures between 2002 and 2005 were revised to reflect the addition of data from Taiwan, Province of China.

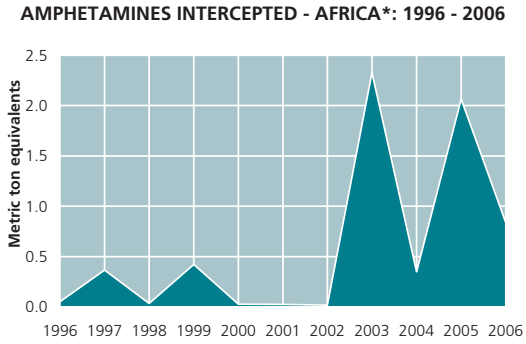
Fig. 147: Interception of amphetamines, 1995 - 2006

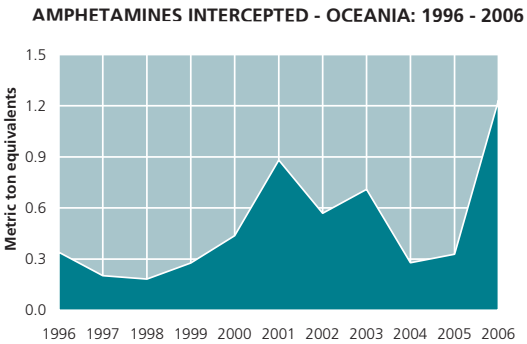






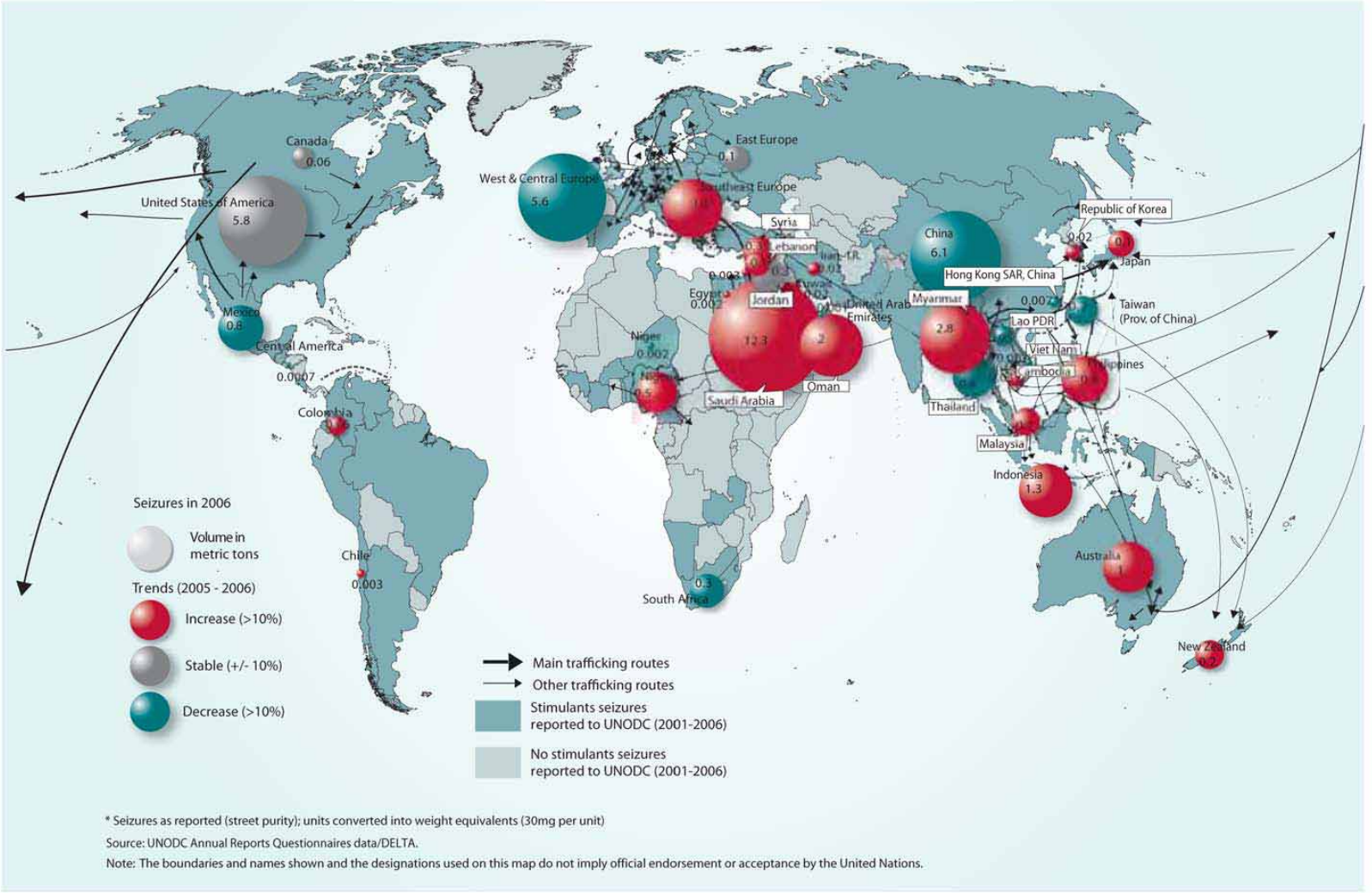






* Increase in 2001 due to huge seizures of Maxiton Forte in Egypt (reported in litres); conversion rate used: 1 litre = 1 kg

Map 20: Trafficking in amphetamines, 2006 (countries reporting seizures* of more than 1 kg)



* Seizures as reported (street purity); units converted into weight equivalents (30mg per unit)

Source: UNODC Annual Reports Questionnaires data/DELTA.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Trafficking in Ecstasy

Ecstasy seizures continued to decline in 2006; regional shifts continue

In 2006, 4.5 mt of ecstasy were reported seized, which continues the declining trend begun in 2004.[27] This trend is also consistent with ecstasy manufacturing estimates which suggest a decline. The largest seizures over the 2000-2006 period were reported from the countries of West and Central Europe (51%), followed by North America (22%), the Oceania region (14%), and East and South-East Asia (8%). During this time a total of 39 mt of ecstasy were seized. The largest ecstasy seizures in 2006 were reported by the USA (26%), followed closely by the Netherlands (24%), then Australia (12%), Canada (8%), the UK (7%), Turkey (4%) and France (3%).[28]

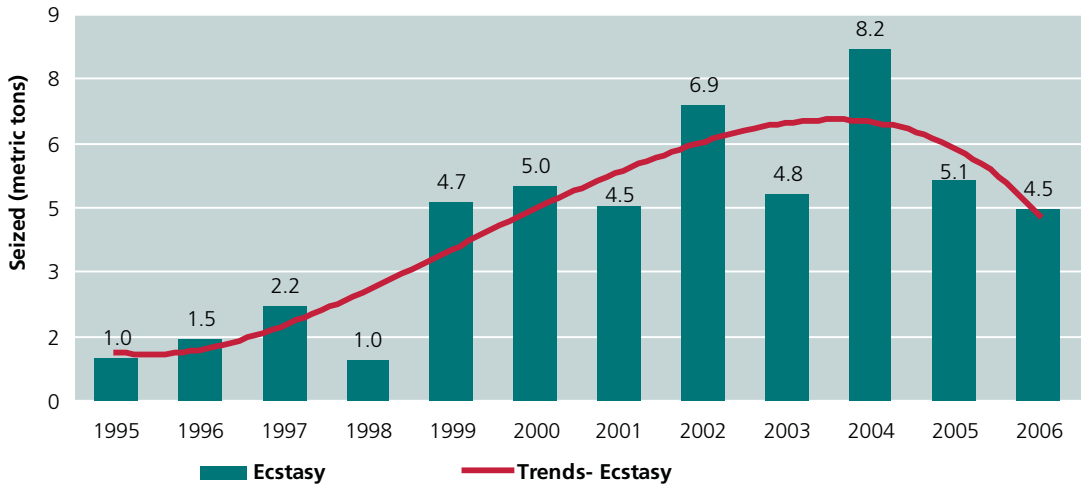
Despite the dominance of West and Central Europe in the ecstasy trade, the general trend has been towards an increase in ecstasy production, trafficking and abuse outside this region. This is clearly reflected in seizure statistics. The share of West and Central Europe in global ecstasy seizures fell from 79% in 1995 to 43% in 2006. As the proportions in West and Central Europe declined, several other regions showed increases. For example, in 1995 North America accounted for 20% of ecstasy seizures, rising to 34% by 2006. Similarly, Oceania's proportion increased from 1% to 12%, Southeast Europe and East and South-East Asian both went from negligible seizures to 6% and 3% of global totals, respectively. Additionally, the number of countries which reported seizures has more than doubled: 32 counties reported seizures in 1995, while in 2006 the number reached 78.

North America and Oceania gain in importance

Europe remains a main illicit manufacturing region for MDMA globally, with the Netherlands and Belgium the most commonly cited 'source' countries. However, as manufacture continues to shift and spread, the importance of these territories as source countries is declining. A shift in ecstasy labs has been identified since 2003, with an increase in North American labs (USA and Canada) and a decrease in European labs (principally the Netherlands and Belgium). In 2006, all of the ecstasy laboratories identified in Canada were of the super-lab variety.[29]

Ecstasy manufacture is becoming increasingly sophisticated, characterized by greater efficiency in manufacture, more specialized staff, and facilitators.[30] In Europe, ecstasy trafficking is conducted by many small trafficking groups of various nationalities. Ecstasy is typically sourced primarily in the Netherlands, Belgium before being trafficked to its final destination.[31]

Fig. 148: Global ecstasy seizures: 1995 - 2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

27 A reported pill of ecstasy was assumed to contain on average 100 mg of MDMA.

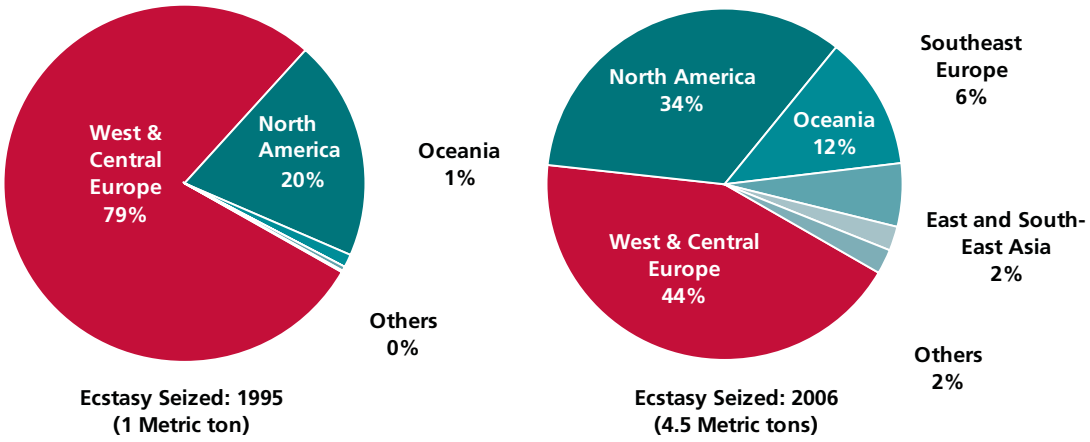
28 Data for the UK refer to 2004; 2004 data are used as proxy for 2005 seizures.

29 US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008).

30 EUROPOL, *Synthetic Drugs and Precursors*, presentation given by the EUROPOL Drug Unit to the Europe-Asia Conference, Paris, 6-7 March 2007.

31 German Narcotica Drugs Annual Report 2007, Bundeskriminalamt, (Wiesbaden, 2008)

Fig. 149: Changes proportions of ecstasy seized, by region: 1995 and 2006



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Trafficking of ecstasy from Europe to North America and some other regions was controlled by criminal groups of Israeli origin.[32] However, the importance of these trafficking groups was significantly reduced by law enforcement in 2002. Canada-based Asian criminal organizations are now the principal suppliers to the US. Reports find that they have largely reconstituted the ecstasy market and have greatly increased manufacture in Canada and distribution operations in several US cities.[33] This is reflected in US seizure statistics, which report declining ecstasy seizures along the east coast, and increasing seizures along the Canadian border. In 2005 the Canadian authorities reported that 85% of the ecstasy seized was domestically produced and 15% came from Europe. By 2006, they reported 99% domestically produced with only 1% being imported from Europe.

Reports from the Canadian authorities also find that only super-lab capacity ecstasy labs—termed 'economic-based' labs—are now found in Canada.[34] Controlled by sophisticated organized crime groups, end products from these labs have been trafficked as far as Australia and Colombia via air, postal, and marine routes. Many recent shipments were found to have included multiple drugs and precursors chemicals, such as ecstasy with marijuana, cocaine, and/or ephedrine to other countries.

Oceania remains an important destination country for ecstasy

According to Australian authorities the main origin countries in 2005/06 for shipments of ecstasy to Australia were, in order of weight, Canada, Belgium, the UK and France. However, the largest ecstasy importation to Australia of 1.2 million Ecstasy tablets sourced in Canada, arrived via Hong Kong, SAR, which may indicate an increase in Asian organised crime connection.[35]

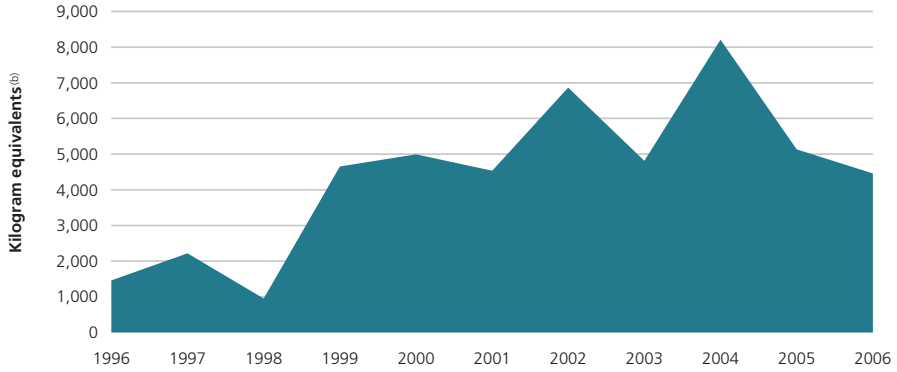
32 US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008).

33 US National Drug Intelligence Center, *2008 National Drug Threat Assessment,* October 2007.

34 Royal Canadian Mounted Police (RCMP): *Drug Situation Report 2006.*

35 Australian Crime Commission, *Illicit Drug Data Report 2005/06*, Canberra 2007.

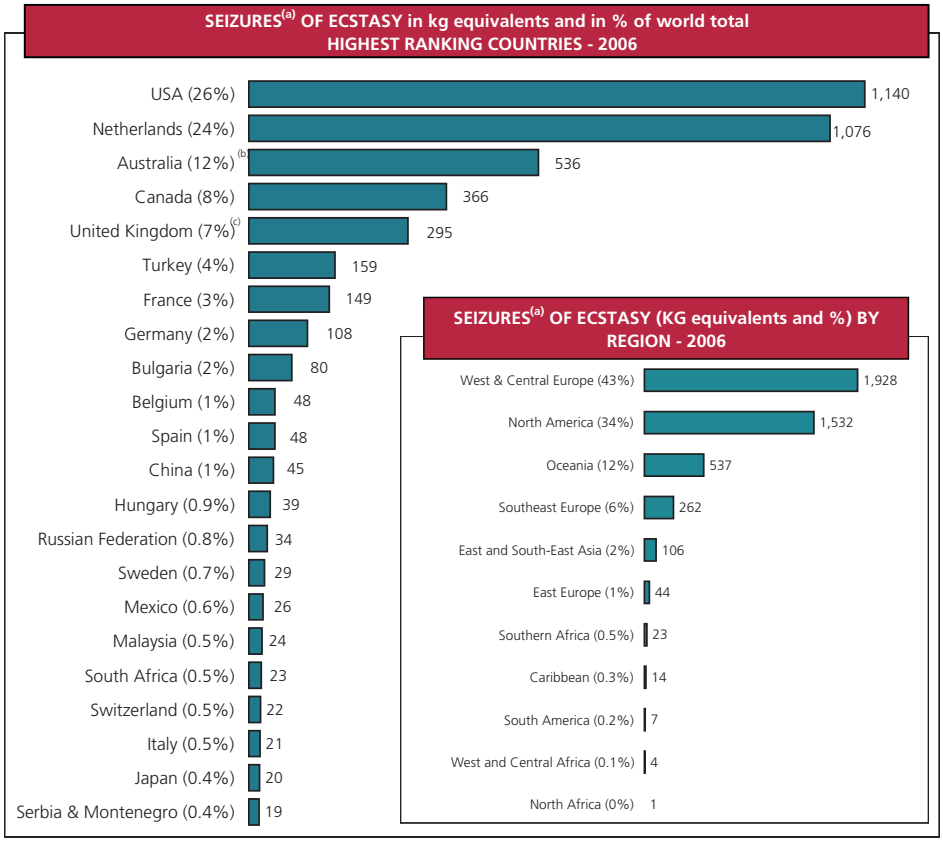
Fig. 150: Changes proportions of ecstasy seized, by region: 1995 and 2006



[a] Separate reporting of 'Ecstasy' seizures only started with the new ARQ. Before, Ecstasy seizures were included under the category of 'hallucinogens'. Trend data shown above refer to the broader category for 1996-1999 and for Ecstasy for 2000-2006. Over the 2000-2006 period, Ecstasy accounted for 93% of the broader category.

[b] 1 unit is assumed to be equivalent to 100mg of MDMA.

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Kilogram equivalents	1,461	2,222	951	4,651	4,993	4,537	6,865	4,811	8,209	5,132	4,460

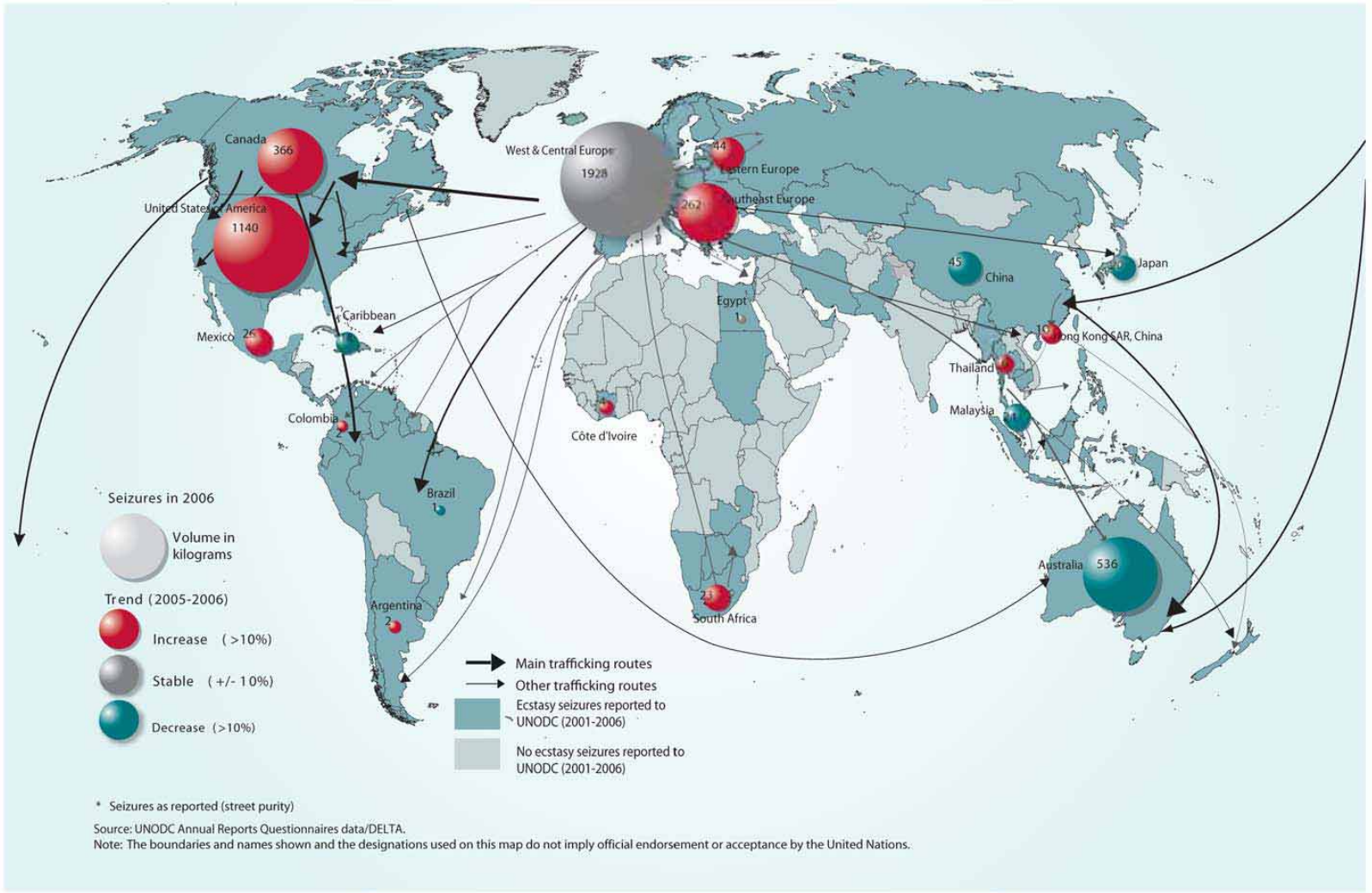


[a] Seizures as reported (street purity); units converted into weight equivalents (100mg / unit)

[b] Total seizures reported by national as well as state & territory law enforcement agencies which may result in double counting.

[c] Data refer to 2005 England and Wales only.

Map 21: **Trafficking in ecstasy, 2006** (countries reporting seizures* of more than 1 kg)



* Seizures as reported (street purity)

Source: UNODC Annual Reports Questionnaires data/DELTA.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

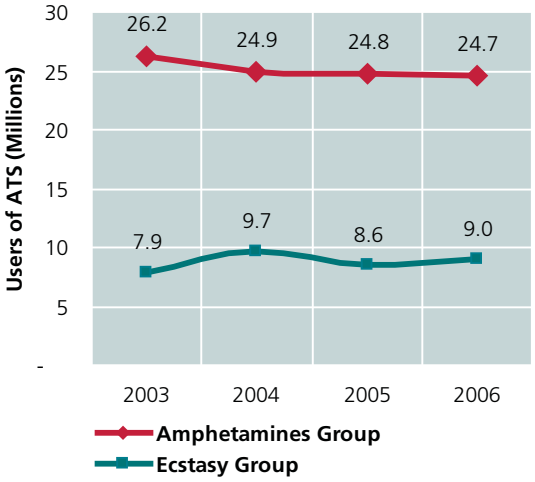
1.5.4 Consumption

Amphetamines and related synthetic stimulants

Amphetamines group users are three-times the number of ecstasy users

An estimated 24.7 million people in the world, equivalent to 0.6% of the population age 15-64 consumed amphetamines in 2006.[1] UNODC estimates ecstasy users to number approximately 9 million world-wide (0.2%), a third of the number of amphetamines group users.[2] Neither estimate has changed substantially compared to last year or the beginning of the new millennium. Together, these figures exceed use levels for cocaine and heroin, combined.

Fig. 151: Estimated number of amphetamine-type stimulant users: 2003-2006

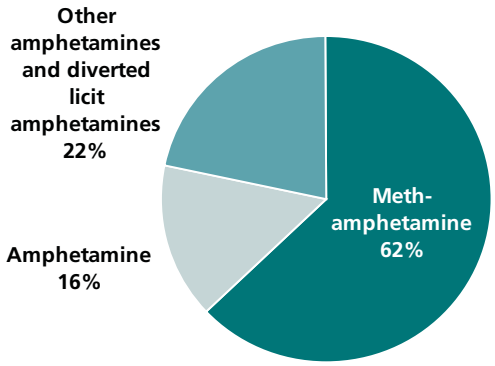


Source: UNODC estimate

Methamphetamine consumption dominates ATS use[3] at the global level

UNODC conservatively estimates, that there are between 15 and 16 million methamphetamine users worldwide, a figure similar to that for heroin or cocaine at the global level. The number of amphetamine users is estimated to be lower, at around 4 million people. A further 5 million people are estimated to consume various diverted pharmaceutical preparations or other illegal synthetic stimulants (e.g., methcathinone).

Fig. 152: Users of *'amphetamines group'* substances, by type (N = 24.7 million)



Source: UNODC estimate

1 The *amphetamines group* includes methamphetamine, amphetamine, and non-specified amphetamine (e.g., fenetylline, methylphenidate, phenmetrazine, methcathinone, amfepramone, pemoline, phentermine), but excludes *ecstasy group* drugs.

2 Ecstasy group includes primarily MDMA, but also MDA, MDEA/MDE. However, forensics has identified changes in the last several years suggesting that much of what consumers believe to be ecstasy containing MDMA is actually a variety of other substances such as methamphetamine, ketamine, and other often uncontrolled substances.

3 Most countries do not differentiate in detail to what extent drug users are taking methamphetamine, amphetamine or other synthetic stimulant. However, member states have repeatedly reported distinct regional characteristics to UNODC which help to establish reasonable orders of magnitude at the regional level. For example, amphetamines group users in East and South-East Asia consume primarily methamphetamine; users in Europe take primarily amphetamine, with a few exceptions, notably the Czech Republic with consumes methamphetamine. National household surveys show that about half of the stimulant users in North America use methamphetamine. 'Captagon' use, which is widespread in the Near and Middle East, typically represents the use of amphetamine (often in combination with caffeine). Users of the amphetamines group in South Africa ('tik') and in North Africa ('Maxiton Forte'), in contrast, appear to use methamphetamine. In addition, information is available that in most parts of South America, Central America, the Caribbean as well as in Western, Central and Eastern Africa and in some parts of southern Africa and Asia, the amphetamines group consists primarily of various diverted pharmaceutical preparations.

Table 13: Annual prevalence estimates of amphetamines use, by region: 2006

Region	Estimated number of users annually	In percent of population 15-64 years	Compared to Global Average
Europe	2,490,000	0.45	Below
West and Central Europe	1,950,000	0.61	Average
South-East Europe	180,000	0.21	Below
Eastern Europe	350,000	0.24	Below
Americas	5,670,000	0.96	Above
North America	3,720,000	1.27	Above
South Americas*	1,960,000	0.66	Above
Asia	13,750,000	0.53	Average
East and South East Asia	13,230,000	0.90	Above
All Other Asian Regions	520,000	0.05	Below
Oceania	470,000	2.14	Above
Africa	2,260,000	0.43	Below
Global	**24,650,000**	**0.58**	

* Includes South and Central America and the Caribbean. "Above" global average is defined as greater than 10% and "below" is less than 10% of the global average.

Sources: UNODC, Annual Reports Questionnaire; Government reports; reports of regional bodies; and UNODC estimates.

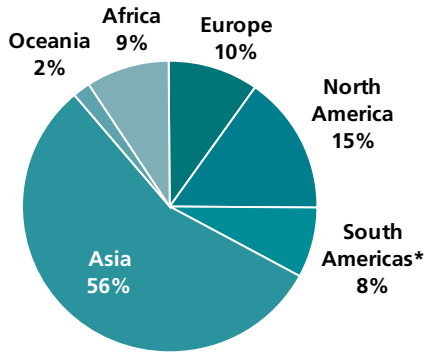
South-East Asia continues to be the world's largest amphetamines market, followed by North America and Europe

Nearly 14 million people or 55% of the world's amphetamines users are estimated to live in Asia. Most of them are methamphetamine users in East and South-East Asia. Ninety seven per cent of all amphetamines used in Asia are consumed in the East and South-East sub-region. The total number of amphetamines users in North America is estimated at around 3.7 million people or 15% of global users. Europe accounts for 10% of all users or 2.7 million people. The number of amphetamines users in Africa is estimated at 2.3 million representing about 9% of global users. Reports from South America (including the Caribbean and Central America) indicate that there are an estimated 2 million people, equivalent to 8% the of global estimate. About 0.6 million people use amphetamines in the Oceania region (2% of the global total).

At the sub-regional level, the highest annual prevalence rates of amphetamines use are reported by the countries in the Oceania region (2.1%), followed by North America (1.3%), Central America (1.2%), the Caribbean (1%), East and South-East Asia (0.9%) and West and Central Europe (0.6%). The average annual prevalence rate in Africa is estimated at 0.4%.

The highest prevalence rates in the Oceania region are reported by Australia; in North America by the United States; and in Europe by the UK, Estonia and Latvia. In the East and South-East Asian region, the highest prevalence is reported by the Philippines and Thailand; in the Caribbean by the Dominican Republic; in Central America by El Salvador; in South America by Brazil; and in Africa, by Nigeria (and some other West African countries), Egypt, and South Africa.

Fig. 153: Breakdown of amphetamines users, by region (N = 24.7 million)



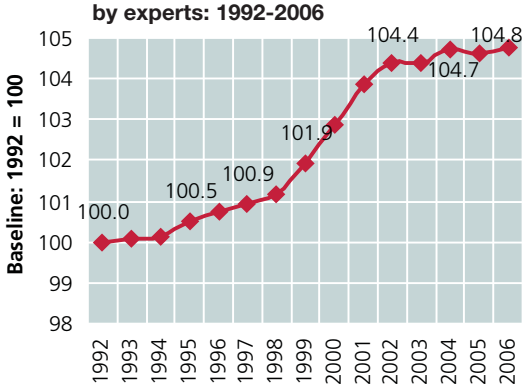
*Includes South and Central America, and the Caribbean.

Sources: UNODC, Annual Reports Questionnaire; Govt. reports; reports of regional bodies; and UNODC estimates.

Amphetamines use is slowing globally

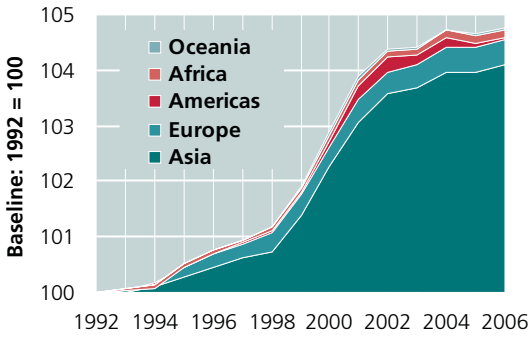
Both UNODC estimates of the total number of amphetamines users, and analysis of expert perceptions, suggest that following strong increases in the 1990s, the growth in amphetamines use is slowing. The increases of the 1990s were due to rapidly rising methamphetamine use in East and South-East Asia. Increases in Europe and in North America also contributed to the global rise of the 1990s.

Fig. 154: Amphetamines use trends as perceived by experts: 1992-2006



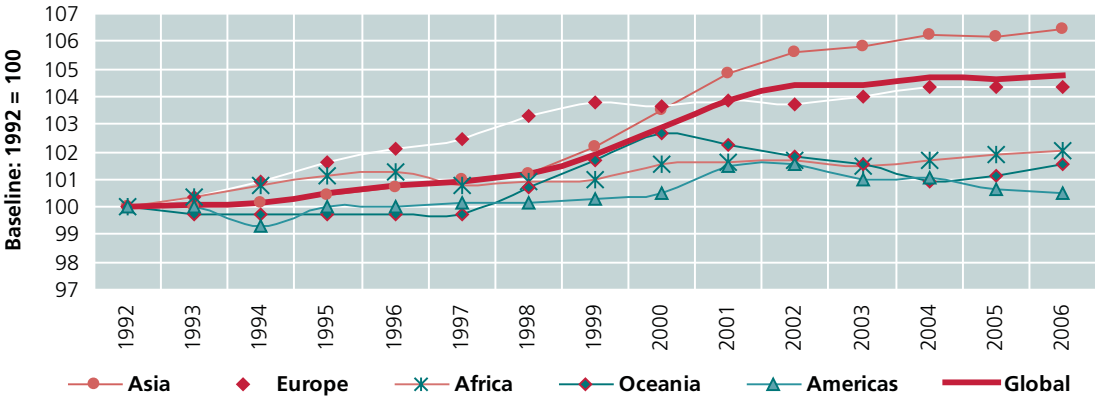
Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports and local studies.

Fig. 155: Amphetamines use trends as perceived by experts regional contribution to global change: 1992-2006



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports and local studies.

Fig. 156: Amphetamines use trends as perceived by experts, changes in regions: 1992-2006 (baseline: 1992=100)



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports and local studies.

Weighted growth rates of expert perceptions of use between 1992 and 2006 were highest in Asia and below average in all other regions.[4] In general growth of amphetamines consumption has slowed in Asia and Europe. Amphetamines use in Africa has been growing, but the overall increases over the 1992-2006 period have been clearly below the global average. The Americas appear to be experiencing some declines in recent years.

Thirty-five countries identified a stable trend, 31 reported an increase, and 10 saw a decrease.[5]

The increases noted by experts were sub regionally specific, with notable patterns. For example, the European States Members that identified worsening conditions were nearly all 'North Eastern' (Belarus, Estonia and Latvia) or 'South-Eastern' (Albania, Bulgaria, Czech Republic and Moldova) European countries. Most West and Central European counties noted stability, except Spain which reported some improvement. In the Americas, Mexico and the countries on Mexico's southern

4 Trends as reported by national experts in response to UNODC's Annual Reports Questionnaire. Points allocated for trend data: 'strong increase' 2; 'some increase': 1; stable: 0; 'some decline' -1; 'strong decline' -2. Reported drug use trends were weighted by the proportion of amphetamines users in a country expressed as a percentage of global amphetamines use. If all countries had reported 'some increase', the global trend line would have increased by one point each year and would have reached 114 by 2006.

5 Increases and decreases were coded from strong increase/decrease or some increase/decrease, and represent the unweighted number of member states responding.

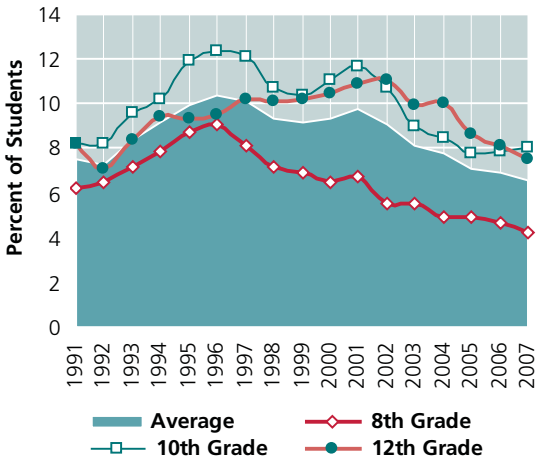
Table 14: Experts perceptions of changing regional amphetamines use, by region: 2006

Region	Member State Experts Responding	Use Problem Increased*	Percent Use Problem Increased	Use Problem Stable	Percent Use Problem Stable	Use Problem Decreased*	Percent Use Problem Decreased
Europe	34	11	32%	22	65%	1	3%
Americas	14	6	43%	7	50%	1	7%
Asia	19	9	47%	2	11%	8	42%
Oceania	1	1	100%	0	0%	0	0%
Africa	8	4	50%	4	50%	0	0%
Global	**76**	**31**	**41%**	**35**	**46%**	**10**	**13%**

*Identifies increases/decreases ranging from either some to strong, unweighted by user population.

Sources: UNODC, Annual Reports Questionnaire Data.

Fig. 157: USA: Annual prevalence of amphetamines use among students: 1991-2007



Source: NIDA, *Monitoring the Future, Overview of Key Findings in 2007*, Bethesda Maryland, April 2008.

boarder (Guatemala and El Salvador) indicated a worsening amphetamines use problem. In Asia, experts believe the problem is worsening in three distinct subregions: the countries located on India's east boarder (Nepal, Bangladesh, and China), China and it's regions in the southern coast (Hong Kong SAR and Macao SAR), and the Near East (Jordan, Syria, and Lebanon). However, experts in Asia also perceived an improvement in the amphetamines use problem in several of the island nations within the China Sea, including Japan, Philippines, Indonesia, and Malaysia.[6]

6 It is important to note that some South-East Asian nations distinguish between methamphetamine pills, powder, and crystalline methamphetamine. In some countries one form of the drug may be decreasing as it is replaced with another form. For example, Thailand reported a decrease in the use of methamphetamine pills, while simultaneously identifying increased use of crystalline methamphetamine.

Methamphetamine use declines in North America

The downward trend of amphetamines use in North America continues, specifically among youth. The downward trend among US students started after 2001, with large declines in use by 10th and 12th graders. Lower levels of use were associated with reports of decreased availability and a greater perception of risk.

The decline was more pronounced for methamphetamine use among North American students. Between 1999 and 2007 methamphetamine use fell by 65% for students in the USA and 72% for students in Ontario, Canada. Continued risk awareness in combination with policies to reduce supply (e.g., improved precursor controls) have contributed to these declines.

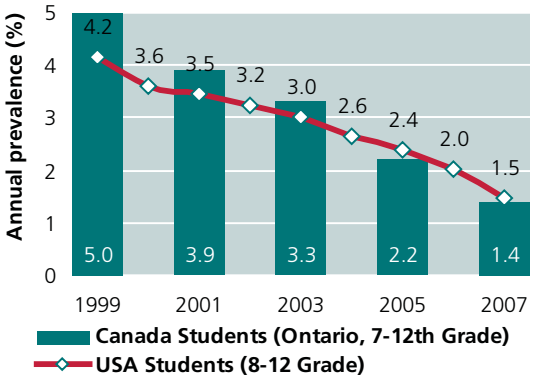
While methamphetamine use remained relatively stable, overall stimulants use rose in the US in 2006. This could be related to methamphetamine users switching to stimulants with greater availability. Methamphetamine use continues to be most prevalent in the West of the country, with rates between two and five times higher than in other areas.[7]

Another indication that stimulant substitution may be occurring in the USA can be seen in data from workplace drug testing, where the downward trend observed since mid-2005 began to change direction in 2007. Workplace drug testing results show methamphetamine on a consistent decline since its peak in 2004.

In North America, the declines in methamphetamine use reported from the USA and Canada have been partly offset by reports of rising use in Mexico, reflecting growing methamphetamine production in that country. Though the bulk of methamphetamine produced in Mexico is destined for the US market, small amounts

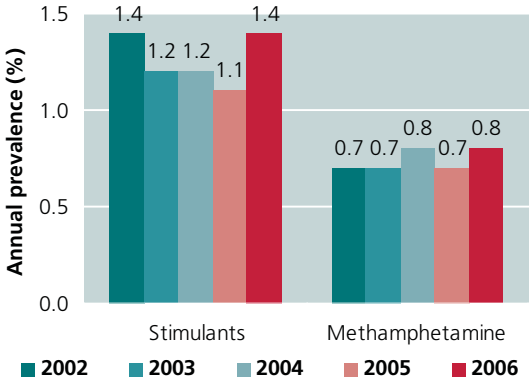
7 SAMHSA (2007), *National Survey on Drug Use and Health, 2006.*

Fig. 158: USA and Canada (Ontario): Annual prevalence of methamphetamine use among students: 1999-2007



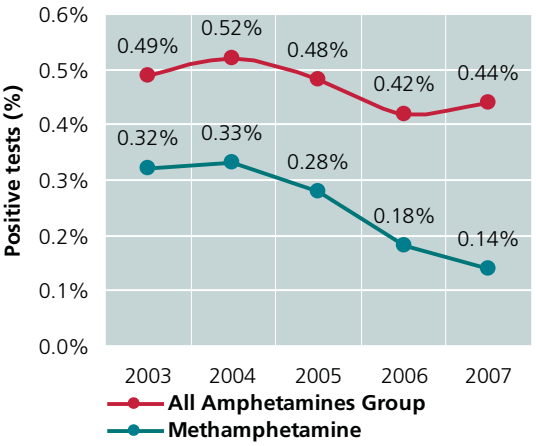
Sources: CAMH, *Drug Use among Ontario Students*, 1997-2007, Toronto (2007) and NIDA, Monitoring the Future, Overview of Key Findings in 2006, Bethesda Maryland (May 2007).

Fig. 159: USA: Annual prevalence of stimulants and methamphetamine use among the population (12 and older): 2002-2006



Source: SAMHSA (2007), *National Survey on Drug Use and Health, 2006*

Fig. 160: USA: Positive workplace drug tests for amphetamine: 2003-2007



Source: Quest Diagnostics, *Drug Testing Index* (March 2008)

remaining in the country are sufficient to increase local availability. Additionally, Mexico, Guatemala and El Salvador indicated worsening amphetamines use problems.[8]

Shifts in use seen in Europe

States Members experts in Europe percieved an overall stabilisation in the use of amphetamine. In 2006, 22 European countries reported a stabilization of amphetamine use, 11 reported an increase. The increases were concentrated in Northeast and Southeast Europe, while most of Western and Central Europe shows stable levels of use.[9]

Europe's largest amphetamine market, the United Kingdom, has shown the most significant downward trend. Annual prevalence of amphetamine use in England and Wales fell from 3.2% in 1996 to a plateau of 1.3% in 2007, a 60% decline in the overall number of users. Investments in prevention as well as measures to limit supply seem to have been partly responsible for the decline. According to a study on EU countries, UK spent twice the EU average on supply and demand interventions.[10]

Sweden has also witnessed significant decreases in amphetamines use. Sweden's annual amphetamine prevalence rates (0.2%) are half the European average (0.5%) and are now among the lowest in Europe.

Use is slowing in Asia

The proportion of Asian countries reporting an increase in methamphetamine use dropped from 54% to 47% in 2006 (19 countries responding), while the number of countries reporting decreases methamphetamine use rose from 19% to 42% in 2006. However, weighing country's expert perceptions by their estimated methamphetamine using population, shows a continuing net increase in use in the region.

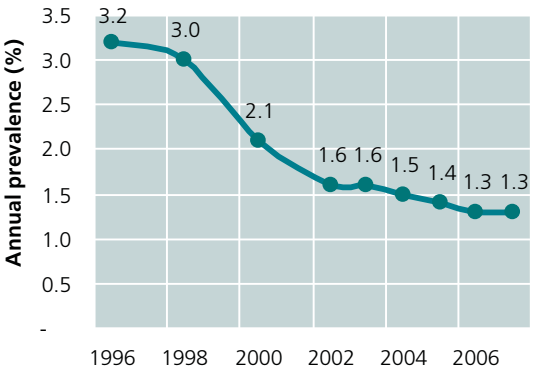
Increases in methamphetamine use are mainly reported by countries of South, East and South East Asia (Nepal,

8 Annual report questionnaire (2006).

9 Spain was the only country reporting any decline in amphetamines use in 2006.

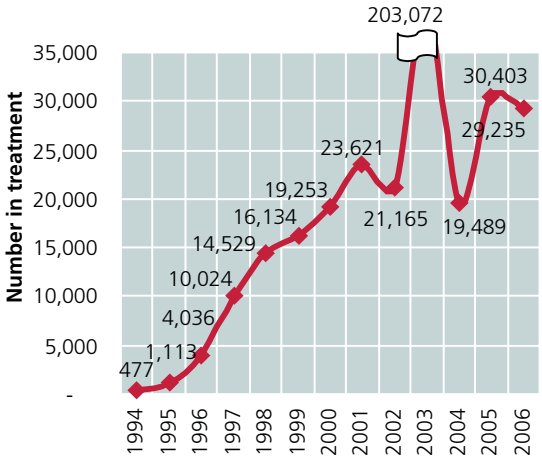
10 Drug related expenditure amounted to €68 in the UK or 0.35% of GDP, more than twice the EU average (0.15%). Higher levels have been only reported by the Netherlands (€139 per capita or 0.66% of GDP) and Sweden (€107 per capita or 0.47% of GDP. (See EMCDDA, *Public Expenditure on Drugs in the European Union*, 2000-2004).

Fig. 161: England and Wales: Annual prevalence of amphetamine use among the general population (age 16-59): 1996-2007



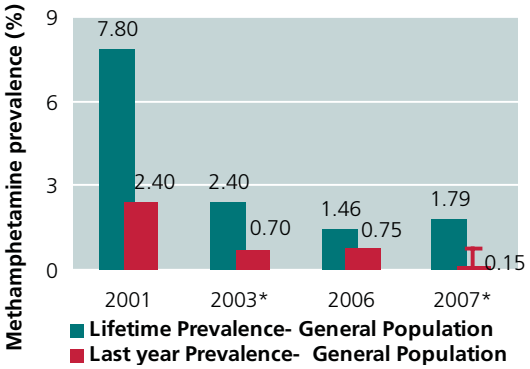
Source: Home Office, *Drug Misuse Declared: Findings from the 2006/07 British Crime Survey,* London (Oct. 2007).

Fig. 162: Thailand: Methamphetamine-related admissions to treatment: 1994-2006



Sources: Office of the Narcotics Control Board, *Thailand Narcotics Annual Report 2003*, UNODC, *Improving ATS Data and Information Systems Project (AD/RAS/01/F97)*, UNODC, *Drug Use Information Network for Asia and the Pacific (DAINAP).*

Fig. 163: Thailand: Prevalence of methamphetamine use: 2001-2007[12]



*UNODC estimate for annual prevalence.
Sources: UNODC, Annual Reports Questionnaire Data; UNODC, Patterns and Trends of Amphetamine-type Stimulants (ATS) and Other Drug of Use in East Asia and the Pacific 2006 (June 2007) and prior years; and UNODC, Drug Use Information Network for Asia and the Pacific (DAINAP).

Bangladesh, China, Hong Kong SAR, Macao SAR, and Myanmar). In contrast, the countries which account for the bulk of all methamphetamine use in Asia (Thailand, Malaysia, Philippines, and Indonesia) report a stabilization or decline.[11]

Japan continues to be Asia's most lucrative methamphetamine market. Following strong increases since the 1970s, all data for Japan suggest that methamphetamine use stabilized or even declined in recent years. Lifetime prevalence rate of methamphetamine was reported to have amounted to 0.4% of the population age 15 and above in 2003, falling to 0.3% by 2005. General stabilization was also seen in lifetime prevalence of methamphetamine use in the country's student population (age 13–15): 0.39% in 2000, 0.44% in 2002 and 0.4% in 2006.

A continued decline in methamphetamine use ('*yaba*' or methamphetamine pills) was reported by the Thai authorities for the year 2006.[13] Surveys conducted in 2003 and 2007 reported lower prevalence rates[14] than previous surveys.[15]

11 Note, in *Patterns and Trends of Amphetamine-type Stimulants (ATS) and Other Drugs of Use in East Asia and the Pacific 2006*, (UNODC, Regional Centre for East Asia and the Pacific June 2007), Thailand reported a decreasing methamphetamine pill problem and an increasing crystalline methamphetamine problem. Differences are related to the clarity of the drug reporting question, the timing of data and differences in key experts who report. These differences in reporting are expected to be resolved in the future.

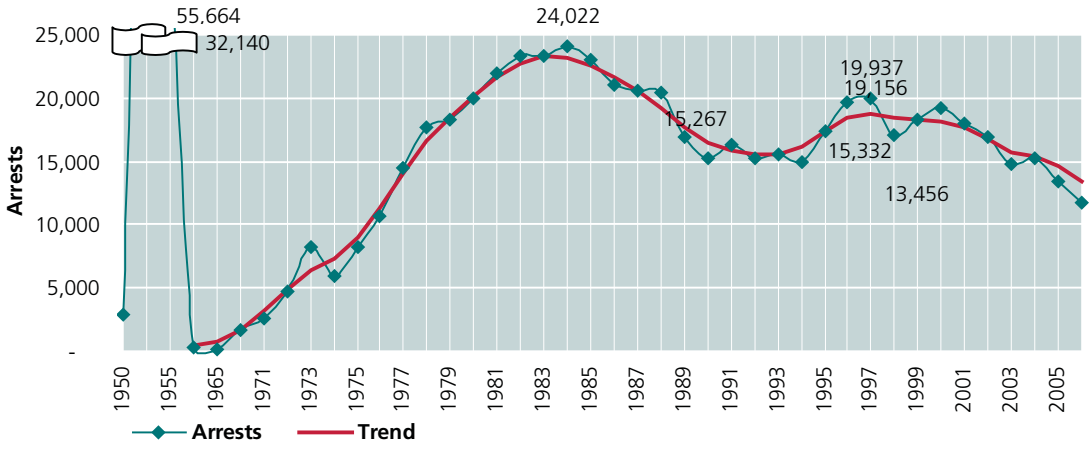
12 The new household survey, conducted in 2007, reported an annual prevalence rate of a 0.145%; UNODC continues to report the prevalence rate at a conservative 0.75% .

13 However, an increase in crystalline methamphetamine (*'ice'*) was also noted. UNODC (Regional Centre for East Asia and the Pacific), *Patterns and Trends of Amphetamine-type Stimulants (ATS) and Other Drugs of Use in East Asia and the Pacific 2006*, (June 2007).

14 It is possible that the government crack-down on the market in 2003 has led to a reduction in self-reporting behaviours among the general population. This in turn is lowering lifetime prevalence results. The more recently reported lifetime prevalence rates would be equivalent to 2 million less people reporting that they have ever tried methamphetamines than in 2001. These results illustrate that drug use self-report data continue to influenced by police operations in the 'war on drugs', thereby continuing to under-estimate the national prevalence of methamphetamine use in Thailand.

15 UNODC (Regional Centre for East Asia and the Pacific), *Patterns and Trends of Amphetamine-type Stimulants (ATS) and Other Drugs of Use in East Asia and the Pacific 2006*, (June 2007).

Fig. 164: Japan: Reported violations against stimulants law: 1950-2006



Sources: Ministry of Health and Social Welfare, National Police Agency of Japan and UNODC, Annual Reports Questionnaire Data.

Seizures of methamphetamine pills in Thailand point to an ongoing reduction of trafficking, and thus indirectly to an ongoing reduction of use. However, seizures of crystalline methamphetamine (*'ice'*) are rising. Treatment demand appeared to be stabilizing in 2006.

In terms of sheer volume, China has one of the world's largest methamphetamine markets, although the methamphetamine prevalence rates are probably lower than in several of the other South-East Asian countries.[16] Reports in 2006 identified large increases in the use of methamphetamine pills and crystalline methamphetamine. China reports that, of registered drug users in 2004, 1.7% used ATS, while that number grew to 11.1% in 2007.[17] These rates are consistent with increases in reported clandestine methamphetamine laboratories and rising seizures in recent years.

The Philippines is a major manufacturing and trafficking location and continues to have the world's highest estimated annual methamphetamine prevalence rate (6%). Although relatively stable at high levels for the past several years, the Philippine authorities now report (expert perceptions) that methamphetamine use levels were on the decline in 2006.

In Indonesia, authorities reported a decline of methamphetamine use to UNODC in their reply to the Annual Reports Questionnaire for 2006. However, data for 2007 indicates that ATS use may be on the rise in the country.[18] This early indicator of increased use could be a sign of drug spill-over into the general community due to increasing manufacture and trafficking.

Ongoing decline in the Oceania region

Household surveys, conducted in Australia have shown a steady decline of methamphetamine use, from an annual prevalence rate of 3.7% in 1998, to 2.3% in 2007, a decrease of 32%.[19]

Data collected through the Drug Use Monitoring in Australia (DUMA) system suggests that the trend towards a modest decline of methamphetamine use also continued in subsequent years. DUMA regularly drug-tests arrestees within 48 hours of custody in selected sites across the country. After a substantial increase throughout the late 1990s peaking in 2003 (28%) the proportion of those arrestees testing positive for methamphetamine, declined slightly to 24% in 2007. The decline has been substantial in Queensland the traditional location of most dismantled methamphetamine laboratories, followed by sites in Western Australia and Southern Australia. While overall methamphetamine use appears to have stabilized, some data point to an ongoing increase in the use of *'crystal ice'* and increased injecting of methamphetamine.[20]

16 To date, no national drug-related household survey has ever been undertaken in China.

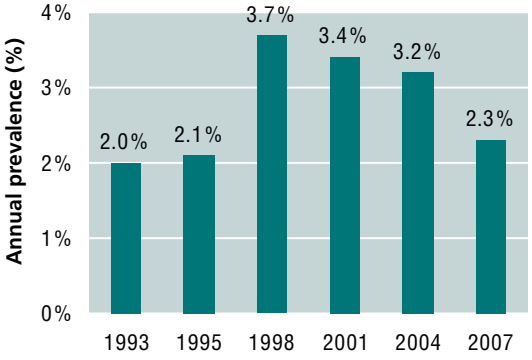
17 Zhao Wanpeng, Deputy Director of International Cooperation Division, Narcotics Control Bureau, Ministry of Public Security, presentation entitled '*Drug data collection in China*', 4th International Forum on the Control of Precursors for ATS, Tokyo Japan, February 2008.

18 UNODC, *Drug Use Information Network for Asia and the Pacific* (DAINAP), 2007. Last updated April 28, 2008.

19 Population age 14 and older. It must be noted though that a direct comparison of the 1998 and the 2001 household survey data in Australia could be - potentially - misleading as the underlying methodology for the surveys changed quite substantially during this period.

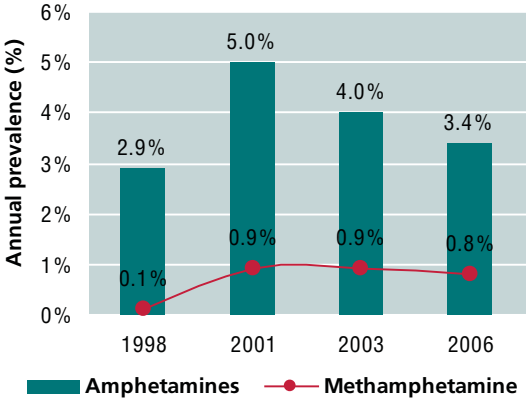
20 National Alcohol and Drugs Research Centre, University of New

Fig. 165: Australia: annual prevalence of amphetamines use among the population (14 and older): 1993-2007



Source: Australian Institute for Health and Welfare (AIHW), *2007 National Drug Strategy - Household Survey 2007*, Canberra (April 2007).

Fig. 166: New Zealand: Annual prevalence of amphetamines use among the population (15-45 years): 1998-2006



Source: Centre for Social and Health Outcomes Research and Evaluation (SHORE), *Trends in drug use in the population in New Zealand: Findings from national household drug surveying in 1998, 2001, 2003 and 2006* (March 2007).

The situation in New Zealand followed similar patterns. New Zealand household survey for the population aged 15-45 showed that annual prevalence of the amphetamines group peaked in 2001 at 5% of the population, but has since decreased to 3.4%. Crystalline methamphetamine peaked at the same time at 0.9%, but has remained relatively stable ever since.

The New Zealand Arrestee Drug Use Monitoring (NZ-ADAM) program also tests people who have recently been arrested (for drug consumption) at several sites around the country. Reports from the program have identified that between 2005 and 2007 nationwide methamphetamine positive tests among arrestees declined slightly, from 12.4% to 11.7%. However, positive tests for amphetamine have increased dramatically from 2.7% to 13.5% during the same period. While the bulk of positive tests for either drug occur in the more populous North Island, lab and seizure evidence suggests that use may be spreading increasingly to the South Island.

Growth in use reported from southern Africa slows

Amphetamines use in Africa has been increasing slowly over the last few years. Much of this growth is fuelled by rapidly increasing methamphetamine use in South Africa. Accounting for less than 1% of all substance related treatment demand, until the end of 2002, treatment for methamphetamine as a proportion of total treatment in Cape Town[21] rose to 15% in 2004, 30% in 2005, before stabilising at 40% in 2006 and 41% in the first six months of 2007.[22] While the rate of increase in Cape Town has slowed, evidence suggests that use is spreading to other areas. Increases in the proportion of treatment demand for methamphetamine have been reported in treatment centres in Pretoria, and are emerging in Durban.[23]

Potential for increases in Near and Middle East and other regions

Limited information regarding ATS use is available on the Near and Middle East region, however recent reports suggest that use is increasing at a rapid pace. According to reports from the INCSR[25], rising levels of use of an ATS marketed under the name *Captagon* have been reported in Saudi Arabia.[24] The report, citing news sources and Government officials, states that the number of drug addicts rose from 109,000 in 2002 to 150,000 in 2005, and between 2006 and 2007, drug use increased an additional 17%.[25] The most recent treatment data provided in the Annual Report Questionnaire identified ATS as the most common drug for treatment in the

South Wales - Methamphetamine in Victoria 2004-2007: Forms & purity (April 2008).

21 Atlantis and Wochester

22 SACENDU, *Monitoring Alcohol & Drug Use Trends in South Africa* (2007)

23 SACENDU (2007), *Monitoring Alcohol & Drug Use Trends in South Africa*. Research Brief Vol 10(2).

24 A recent analysis of *Captagon* (originally fenetylline, reported more commonly today as amphetamine) analysis was not provide to UNODC, however data provided in the World Customs Organization's, *Customs and Drugs Report 2006* (June 2007), identified Captagon seized in Saudi Arabia as amphetamine.

25 US Department of State, *International Narcotics Control Strategy Report (INCSR) 2008*, Vol 1 (March 2008).

country. These reports of significant increases correlate with the dramatic increases in trafficking that have been reported over the last several years. For example, in 2000, 291 kg of ATS were seized – by 2006 that number increased to 12.3 metric tons. And, for the first time, in 2006 these seizures included reports of methamphetamine. Significant seizures (2 mt) were also reported by neighbouring Oman in 2006 and other counties in the region.[26]

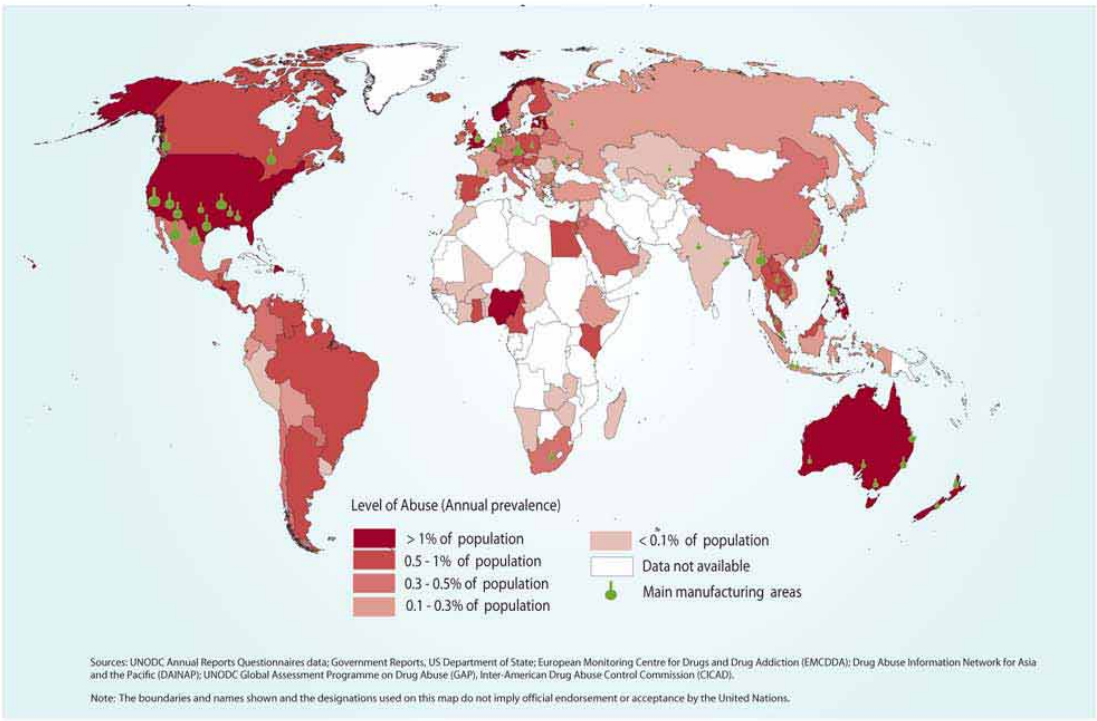
Rising levels of ATS use in South America

Rising levels of ATS use have been reported from South America (Argentina, Peru), Central America (Guatemala, El Salvador), and the Caribbean (Dominican Republic). In these regions ATS originate mainly from licit channels. The defined daily doses per 1,000 inhabitants for legally produced Schedule-IV stimulants in the Americas amounted to nearly 11 over the 2004-2006 period, up from levels around 7 over the 2000-2002 period or rates between 1 and 2 currently in Europe or Asia. In 2006, Argentina, the United States, and Brazil led the world with the highest calculated rate of use of the Schedule-IV stimulants at nearly 17, 12, and 10 daily doses per 1,000, respectively.[27]

26 In order of magnitude the following regional countries reported ATS seizures greater than 10 kg in 2006: Jordan (328 kg), Syria (273 kg), Lebanon (111 kg), Kuwait (17 kg), and Iran (16 kg). Other regional countries also reported ATS seizures (in amounts under 10 kg): Israel, United Arab Emirates, Pakistan, Bahrain, and Qatar.

27 INCB, *2007 Psychotropic Substances*, New York 2008.

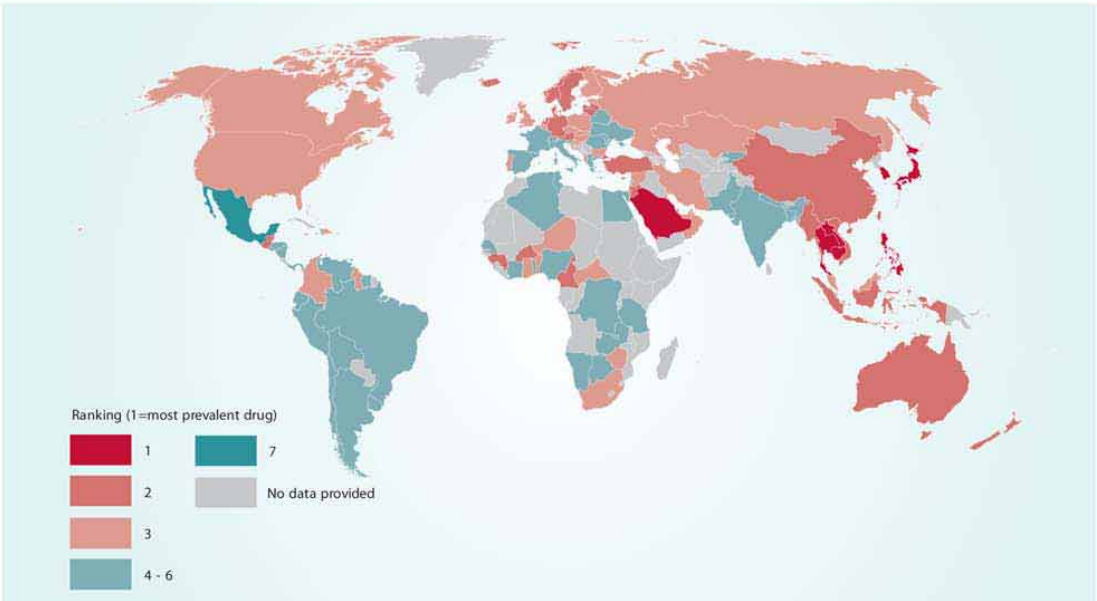
Map 22: Use of amphetamines in 2006/2007 (or latest year available)



Sources: UNODC Annual Reports Questionnaires data; Government Reports, US Department of State; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); Drug Abuse Information Network for Asia and the Pacific (DAINAP); UNODC Global Assessment Programme on Drug Abuse (GAP), Inter-American Drug Abuse Control Commission (CICAD).

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

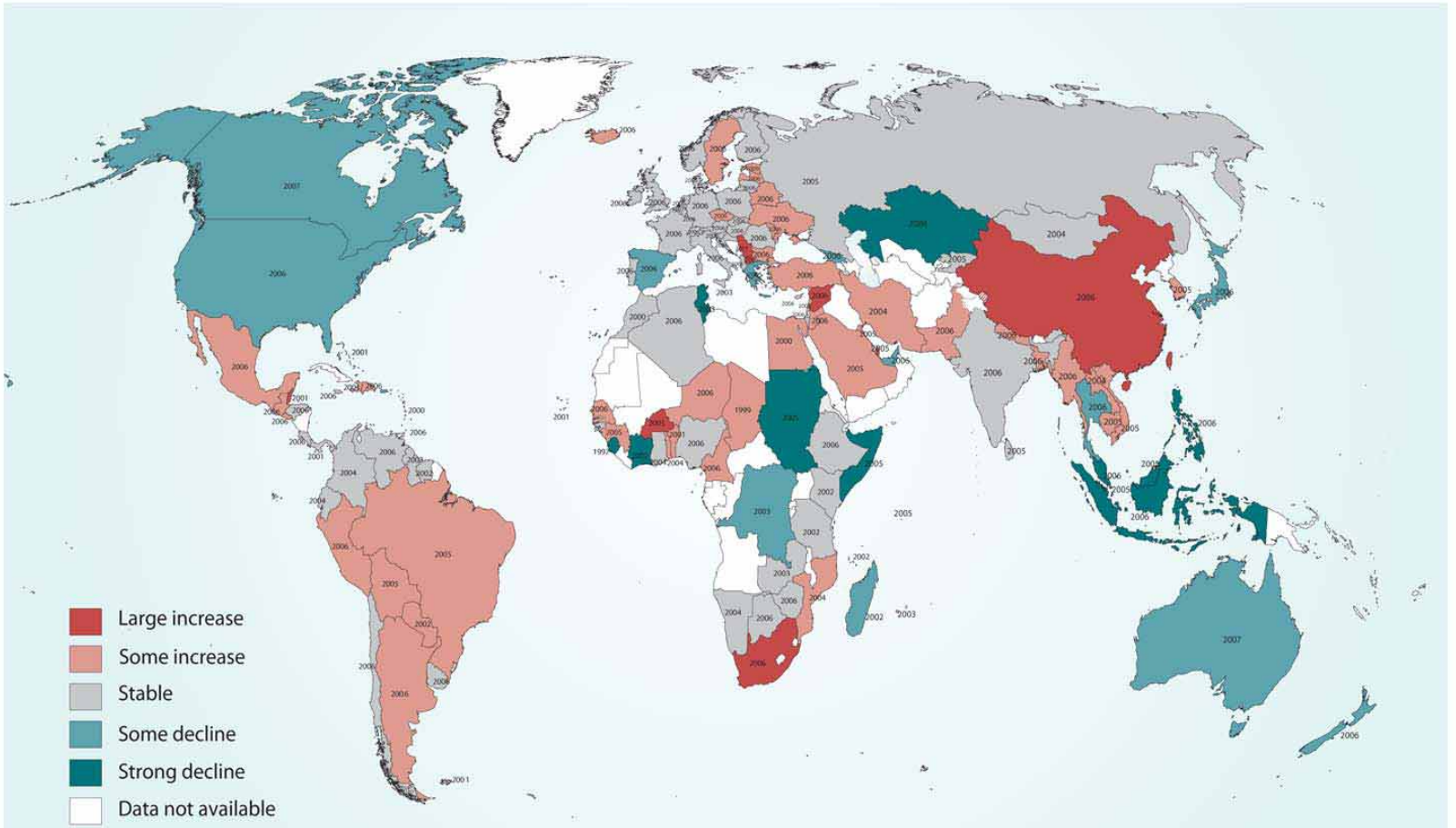
Map 23: Ranking of amphetamine-type stimulants in order of prevalence in 2006 (or latest year available)



Source: UNODC Annual Reports Questionnaires data/DELTA; Government Reports, US Department of State; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); Drug Abuse Information Network for Asia and the Pacific (DAINAP); UNODC Global Assessment Programme on Drug Abuse (GAP); Inter-American Drug Abuse Control Commission (CICAD); UNODC Rapid Assessment Studies, Council of Europe, ESPAD.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 24: **Changes in the use of "amphetamines" (methamphetamines, amphetamines and related substances), 2007 (or latest year available)**



Sources: UNODC Annual Reports Questionnaires data, National Household Surveys submitted to UNODC, United States Department of State (Bureau for International Narcotics and Law Enforcement Affairs), International Narcotics Control Strategy Report, Law Enforcement Reports, UNODC, Meetings of Heads of Law Enforcement Agencies (HONLEA), UNODC Illicit Drug Trends publications for various countries, Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP), UNODC Data for Africa Project.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

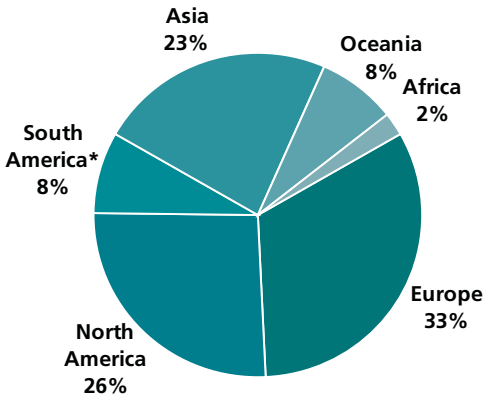
Ecstacy

Ecstasy use concentrated in Western Europe and North America

With year on year global prevalence unchanged, ecstasy use is estimated to affect approximately 9 million people or 0.2% of the population age 15-64.[28] There are about 3 million ecstasy users in Europe, accounting for a third of ecstasy users worldwide. About 90% of them are located in West and Central Europe. The annual prevalence rate of ecstasy use is estimated at 0.8% of the population in West and Central Europe, similar to the levels reported from North America (0.8%). Drug use trends of Western Europe are largely stable but continue growing in several East and South-East European countries. Ecstasy use levels in North America reflect some 2.4 Million users.

The annual ecstasy prevalence rates in the Oceania region (3.2%) have generally begun to stabilize. Regardless, these are still considerably higher than in any other region. Ecstasy prevalence in Asia remains low (0.1%). However, Asia, notably East and South-East Asia, have become growing ecstasy markets over the last few years. In addition, some countries in South America (Argentina, Chile, Peru)have reported rising levels of ecstasy use.

Fig. 167: Global distribution of ecstasy use: 2006 (9 million users)



Sources: Annual Reports Questionnaire data, Government reports, reports of regional bodies, UNODC estimates.

Global ecstasy consumption has stabilized

With the massive increases in the 1990s, ecstasy use peaked at an estimated 9.7 million users in 2004. Data now suggest that ecstasy use has stabilized at the global level over the last few years. Stabilization is mainly due to a significant decline reported over the last few years from North America.

Table 15: Annual prevalence of ecstasy use: 2006 (or latest year available)

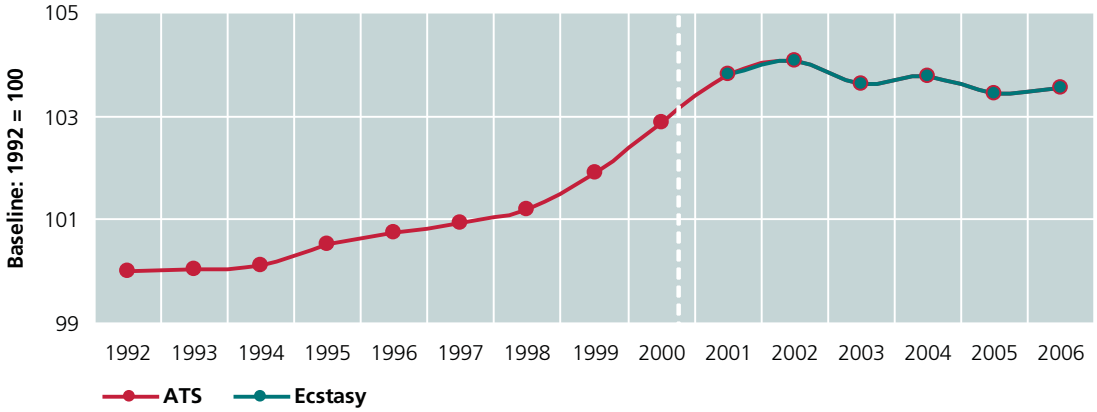
Region	Estimated number of users annually	In percent of population 15-64 years	Compared to Global Average
Europe	2,945,000	0.54	Above
West and Central Europe	2,624,000	0.82	Above
South-East Europe	204,000	0.24	Above
Eastern Europe	117,000	0.08	Below
Americas	3,094,000	0.53	Above
North America	2,367,000	0.81	Above
South Americas*	727,000	0.25	Above
Asia	2,103,000	0.08	Below
East and South East Asia	1,981,000	0.13	Below
All Other Asian Regions	122,000	0.01	Below
Oceania	706,000	3.21	Above
Africa	199,000	0.04	Below
Global	**9,047,000**	**0.21**	

*Includes South and Central America, and the Caribbean. "Above" global average is defined as greater than 10% and "below" is less than 10% of the global average.

Sources: Annual Reports Questionnaire data, various Government reports, reports of regional Bodies, UNODC estimates

28 Caveat: what is often sold as ecstasy is actually a combination of many substances, including methamphetamine. ONDCP, *National Drug Control Strategy, 2008 Annual Report*; Japan Ministry of Health and Welfare, Kanto Ecstasy Project, *Ecstasy in Japan (2003-2006).*

Fig. 168: ATS/Ecstasy use trends as perceived by experts[29]: 1992-2006



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Use Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Use (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports and local studies.

Table 16: Experts perceptions of changing regional ecstasy use, by region: 2006

Region	Member State Experts Responding	Use Problem Increased*	Percent Use Problem Increased	Use Problem Stable	Percent Use Problem Stable	Use Problem Decreased*	Percent Use Problem Decreased
Europe	27	7	26%	15	56%	5	19%
Americas	11	5	45%	6	55%	0	0%
Asia	13	4	31%	3	23%	6	46%
Oceania	1	0	0%	1	100%	0	0%
Africa	5	1	20%	4	80%	0	0%
Global	**57**	**17**	**30%**	**29**	**51%**	**11**	**19%**

*Identifies increases/ decreases ranging from either some to strong, unweighted by user population.

Sources: UNODC, Annual Reports Questionnaire Data.

In 2006, 29 countries identified a stable ecstasy trend over 2005, 17 noted an increase, and 11 reported a decrease.[30]

The increases noted by experts were sub-regionally specific. For example, of the seven European States Members that identified worsening conditions, five could be plotted in a trapezoid region from Albania, Bulgaria and the Republic of Moldova in the North, to Turkey and Cyprus in the South. All other Central and West European counties noted stability or decreases.[31] In the Americas, increases were specific only to South American countries: most increases were reported in the western and southern sub-regions of South American (i.e., Argentina, Chile, and Peru). However, experts reported no decreases in ecstasy use in the Americas for 2006. In Asia, 46% of the experts responding believe the ecstasy use problem has improved in the region along the China Sea. Improvements were noted by Japan, the Philippines, Hong Kong SAR, Indonesia, and Malaysia.[32]

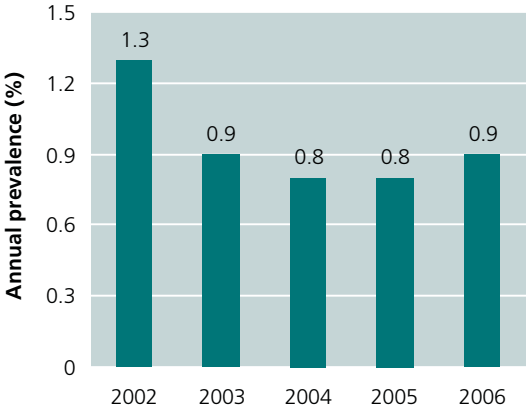
29 Trends as reported by national experts in response to UNODC's Annual Reports Questionnaire. Points allocated for trend data: 'strong increase' 2; 'some increase': 1; stable: 0; 'some decline' -1; 'strong decline' -2. Reported drug use trends were weighted by the proportion of ecstasy users in a country expressed as a percentage of global amphetamine use. If all countries had reported 'some increase', the global trend line would have increased by one point each year and would have reached 113 by 2005. Ecstasy trend data were systematically collected only as of 2000. As there are indications from a number of countries that ecstasy trends in the 1990s showed similar growth rates as ATS in general, the latter trends are shown in the graph for the period 1992-1999 and are thus used as a proxy for the likely ecstasy trends.

30 Increases and decreases were coded from strong increase/decrease or some increase/decrease, and represent the unweighted number of States Members responding.

31 No regional patterns were identified with the European countries reporting use decreases.

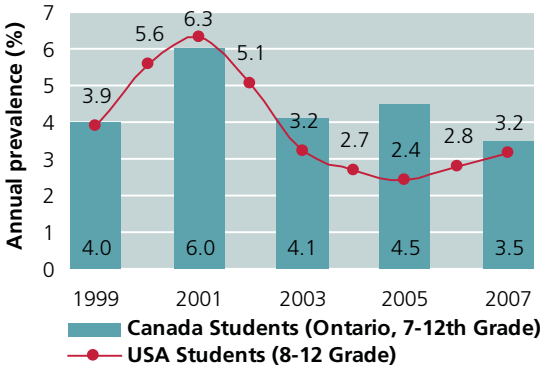
32 Note, in *Patterns and Trends of Amphetamine-type Stimulants (ATS) and Other Drugs of Use in East Asia and the Pacific 2006*, (UNODC, Regional Centre for East Asia and the Pacific June 2007), Japan

Fig. 169: USA: Ecstasy use among the general population (age 12+): 2002-2006



Source: SAMHSA, Office of Applied Studies, *National Survey on Drug Use and Health, 2002, 2003, 2004, 2005, and 2006*.

Fig. 170: USA and Canada (Ontario): Annual prevalence of ecstasy use among students: 1999-2007



Sources: CAMH, *Drug use among Ontario students, 1997-2007*, Toronto (2007) and NIDA, *Monitoring the future, overview of key findings in 2007*, Bethesda Maryland (April 2008).

Worsening use conditions were, however, reported for mainland China.

Youth drives consumption in North America

Although, according to household surveys, there has been a very slight increase in ecstasy use among the general population in 2006, long term trends are declining to stable in the USA. General population surveys in the USA found a decline in the use of ecstasy from 1.3% of the population (age 12 and above) in 2002 to 0.9% in 2006.

The annual prevalence of ecstasy use among high-school students of the province of Ontario, Canada, declined by around one third from 2001 and 2007. However, ecstasy use among USA high-school students in 2007 showed an increase in prevalence over 2005 estimates. The rates remain lower than the peak levels reported in 2001, and are still lower than in 1999.

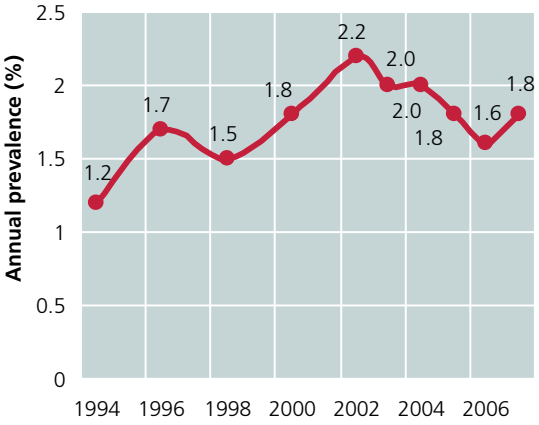
The increasing trend between 2005 and 2007 was driven in large part by increases in use amongst 10th and 12th grade students. Increased use in ecstasy among teens appears related to the declining perceptions of drug risk and attitudes of disapproval of its use, following many years in which the opposite trends were observed.

Possible shifts in use in Europe detected

European trends reflect an overall stabilization or decline in the traditional ecstasy markets of Western and Central Europe. The United Kingdom, for many year's Europe's largest ecstasy market, has seen notable decreases in the annual prevalence of the general population. As of 2007, England and Wales reported a decrease of 18% in prevalence from the peak in 2002.

Ecstasy rates are rising contrary to the stable trends in West and Central Europe, in South-East Europe as well in Eastern Europe (from far lower levels). With the exception of Croatia, all of the experts from the East and South-East European countries reporting to UNODC in 2006, perceived rising levels of ecstasy use.

Fig. 171: England and Wales: Annual prevalence of ecstasy use: 1994-2007

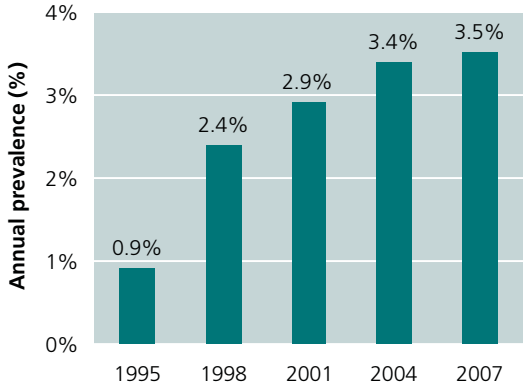


Source: Home Office, *Drug Misuse Declared: Findings from the 2006/07 British Crime Survey*, London (Oct. 2007).

To declining use in Asia and Oceania stable

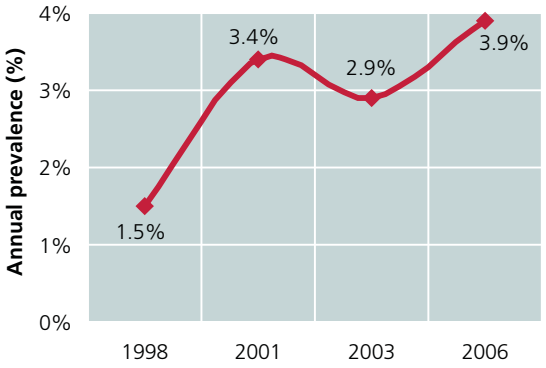
reported an increasing ecstasy use trends in 2006, counter to what is reported herein. Differences are related to timing of data and differences in key experts who report.

Fig. 172: Australia: Annual prevalence of ecstasy use (14 and older): 1995-2004



Source: Australian Institute for Health and Welfare (AIHW), *2007 National Drug Strategy - Household Survey 2007*, Canberra (April 2007).

Fig. 173: New Zealand: Annual prevalence of ecstasy use (15-45 years): 1995-2004



Source: Centre for Social and Health Outcomes Research and Evaluation (SHORE), T*rends in drug use in the population in New Zealand: Findings from national household drug surveying in 1998, 2001, 2003 and 2006* (March 2007).

In 2006, six (46%) Asian countries reported a decline and an additional three reported a stabilization; just four reported an increase – including China. Only two years previously, 50% of Asian counties responding reported an increase and only two saw a decline in ecstasy use.

In Australia, ecstasy use rose only slightly in 2007, suggesting a stabilization following years of significant increases. According to household survey data, ecstasy use among the general population rose in Australia from 0.9% in 1995 to 3.4% in 2004 and only marginally to 3.5% in 2007.

Data collected through Australia's DUMA (Drug Use Monitoring in Australia) system, suggest that the upward trend stabilized in 2006.[33] The proportion of those arrested, testing positive for ecstasy in selected sites[34], increased from 0.5% in 2000 to 2.5% in both 2005 and 2006.[35] This was generally in line with the household survey results.

New Zealand continues to show increased prevalence of ecstasy use among the general population. In 1998, household surveys found 1.5% annual prevalence of ecstasy. By 2006, the prevalence more than doubled to 3.9% for the general population aged 15-45 year old.

Ecstasy use continues to increase in South America

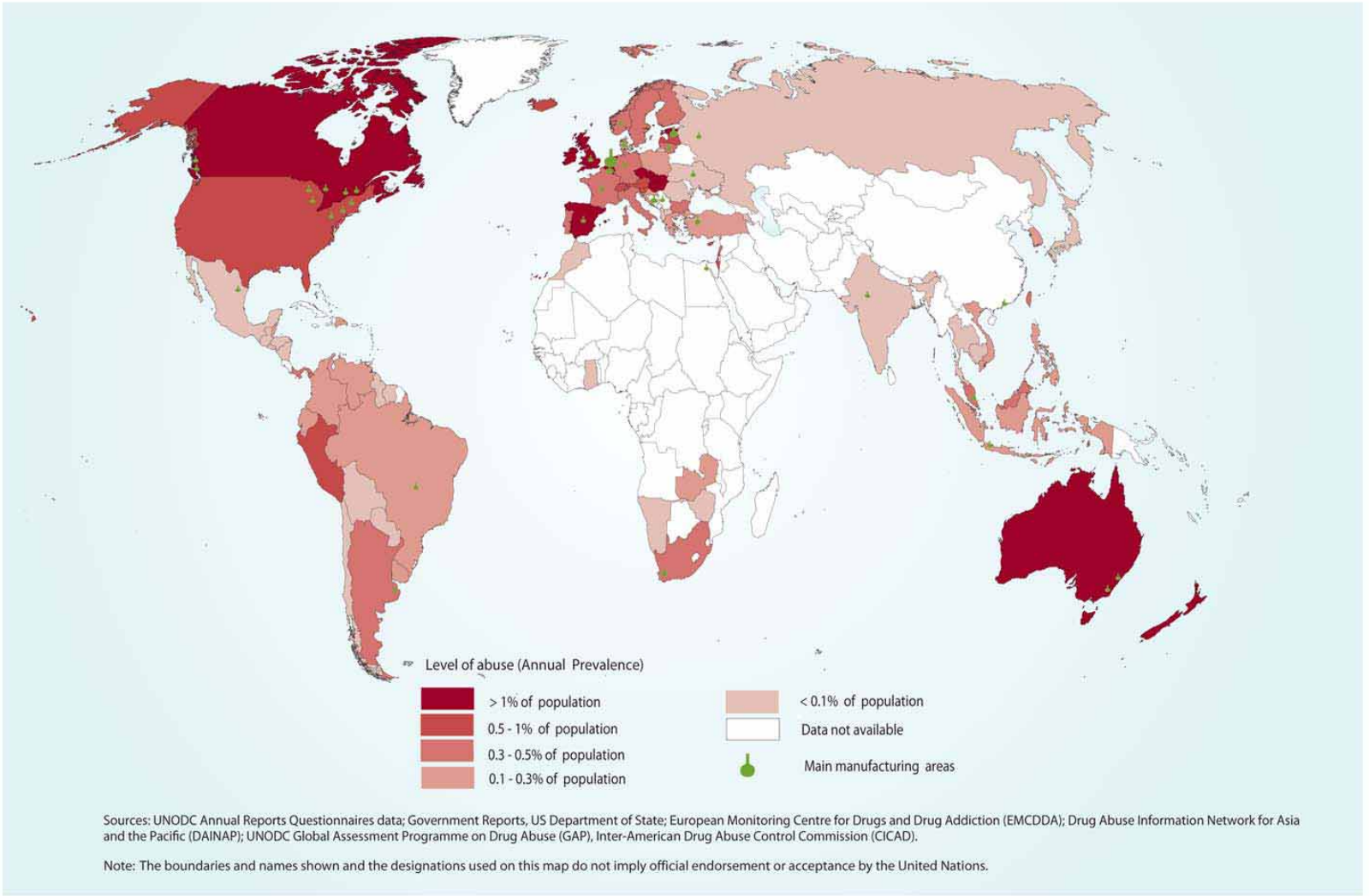
Ecstasy use continued to increase in countries of Central America (Guatamala and El Salvador) and South America (Argentina, Chile, and Peru). Five countries in that region reported an increase, three saw a stabilization but not a single one reported a decline. Most of the ecstasy found in these markets continues to originate in Europe, though there have been reports of supply from Canada.

33 This system foresees that arrestees in selected sites across the country are regularly tested (urine-analysis) for drug consumption within 48 hours after having entered custody.

34 New South Wales (Bankstown and Parramatta); Queensland (Southport and Brisbane); South Australia (Elizabeth and Adelaide); Western Australia (Perth); Australia (unweighted average of results from all sites)

35 Sources: Australian Institute of Criminology (AIC), *Drug Use Monitoring in Australia (DUMA), 2006 Annual Report on Drug Use among Police Detainees,* Canberra 2007, and preliminary DUMA data for 2007.

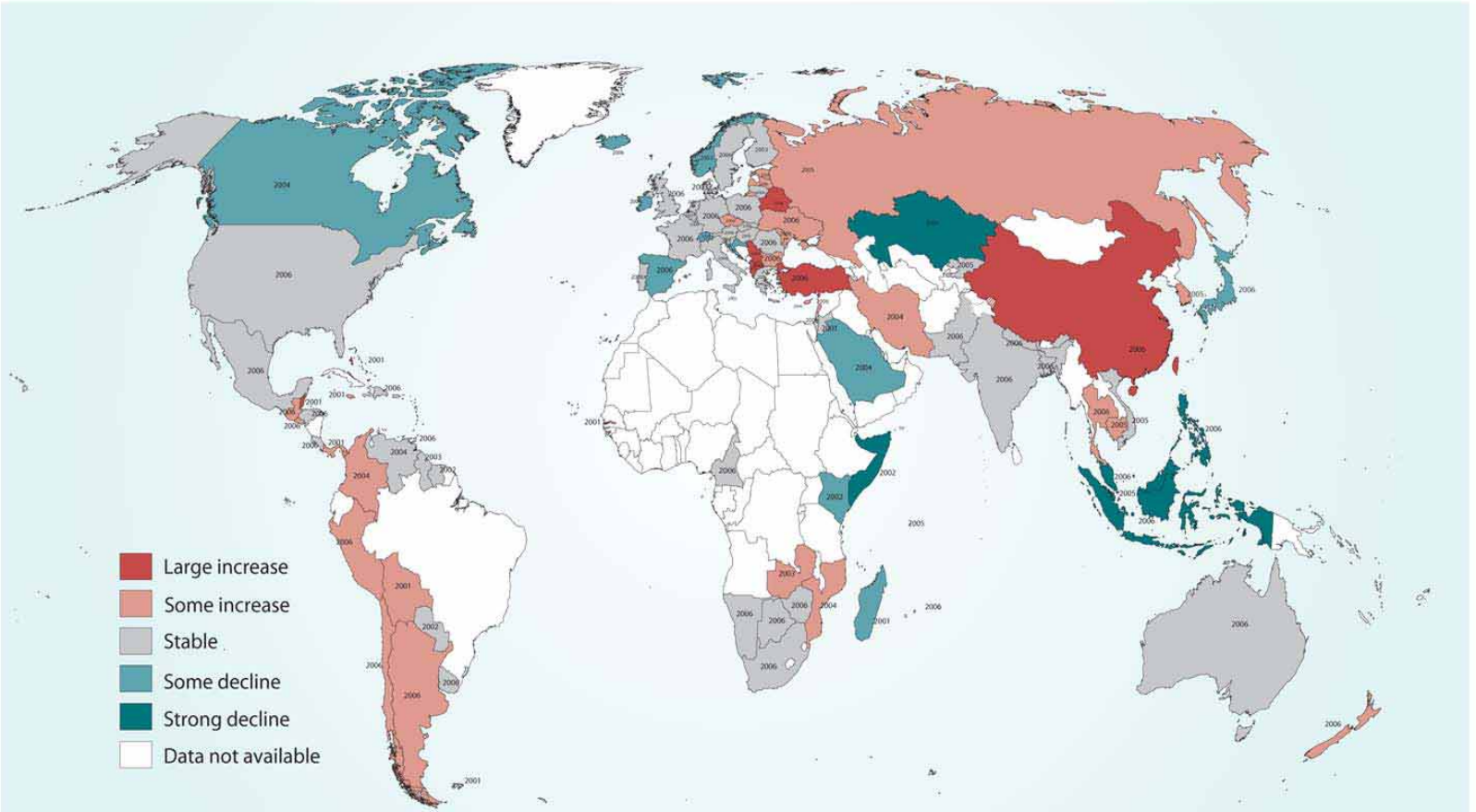
Map 25: **Use of ecstasy in 2006 (or latest year available)**



Sources: UNODC Annual Reports Questionnaires data; Government Reports, US Department of State; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA); Drug Abuse Information Network for Asia and the Pacific (DAINAP); UNODC Global Assessment Programme on Drug Abuse (GAP), Inter-American Drug Abuse Control Commission (CICAD).

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map 26: **Changes in the use of ecstasy (MDA, MDEA, MDMA), 2006 (or latest year available)**



Sources: UNODC Annual Reports Questionnaires data, National Household Surveys submitted to UNODC, United States Department of State (Bureau for International Narcotics and Law Enforcement Affairs), International Narcotics Control Strategy Report, Law Enforcement Reports, UNODC, Meetings of Heads of Law Enforcement Agencies (HONLEA), UNODC Illicit Drug Trends publications for various countries, Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP), UNODC Data for Africa Project.

Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

2. A CENTURY OF INTERNATIONAL DRUG CONTROL

Timeline

1799 Tightening of control over opium imports in China

1800 Opium imports into China: 200 mt

1880 All opium imports into China: 6,500 mt

1880 Domestic opium production in China: 6,500 mt

1890 Ban on opium cultivation in China lifted

1896 Domestic opium production in China: 12,000 mt

1898 Opium imports into China: 3,280 mt

1906 Domestic opium production in China: 35,300 mt; global opium production 41,600 mt

1906 Opium exports from India: 4,208 mt

1907 Opium exports from Hong Kong: 2,571 mt

1907 Opium imports into China: 3,292 mt

1907 Opium imports into Great Britain: 386 mt

1907 Number of global opium consumers:
· 25 million, 1.5% of global population

1908 Opium imports into China: 3,000 mt.

1909 Shanghai Opium Comission

1912 The Hague Convention

1920 International drug control is taken up by the League of Nations

1925 Second Opium Conference and International Opium Convention

1931 The Convention for limiting the Manufacture and Regulating the Distribution of Narcotic Drugs

1946 International drug control continues under the auspices of United Nations

1946 Protocol (transferring international drug control to the United Nations)

1948 Synthetic Narcotics Protocol

1953 Opium Protocol

1961 Single Convention on Narcotic Drugs

1971 Convention on Psychotropic substances

1972 Protocol amending the Single Convention

1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic substances

1990 Global illicit cultivation of opium poppy: 262,754 ha

1990 Global illicit production of opium: 3,760 mt

1990 Global illicit cultivation of coca bush: 211,700 ha

1990 Global illicit production of cocaine: 774 mt

1998 Special Session of the General Assembly, Political Declaration and Guiding Principles

2006 Number of global opiate consumers:
· 16.5 million in 2006 annual prevalence; 0.25% of global population

2007 Global illicit cultivation of opium poppy: 235,700 ha

2007 Global illicit production of opium: 8,870 mt

2007 Global illicit cultivation of coca bush: 181,600 ha

2007 Global illicit production of cocaine: 994 mt

2.0 A Century of International Drug Control

Introduction

This chapter looks back at 100 years of drug control. It opens with a brief history of the opium trade, and illustrates how national governments were able to move beyond their individual commercial interests to embrace a system of international norms created for the common good. It then looks at the efforts made over a century to codify a global approach to controlling addictive substances and the complex negotiations that resulted in the present body of international law. It closes with a brief assessment of the progress made and the challenges that lie ahead.

Today's international drug control system is rooted in efforts made a century ago to address the largest substance abuse problem the world has ever faced: the Chinese opium epidemic. At the turn of the century, millions of Chinese were addicted to opium, which was freely traded across borders at the time. China's attempts to unilaterally address the problem failed, and it was not until the first international agreements were reached that a solution became possible. The story of the Chinese opium problem and the international reaction it engendered represents the seminal chapter in global efforts to control substance abuse.

2.1 Origins: The development of the opium problem in China

The use of opium for medicinal and recreational use is documented in antiquity. The Sumerians referred to it as 'Gil Hul' or 'joy plant' as early as 3000 B.C., [1] and its use is documented in the Near and Middle East across the centuries. The exact date that opium was introduced to China is unknown, but there seems to have been some domestic production as early as the 11th century A.D.[2] Before the 19th century, though, China imported most of its opium, and until the final centuries of the last millennium, the drug remained too expensive for popular use.

In contrast, a nearby empire had, by the 16th century, expanded production to the point that a lucrative export trade began to develop – India. Recognising its economic potential, the Mogul empire introduced a state monopoly on the production and distribution of opium around the time of Akbar the Great.[3] This monopoly was later resurrected by the British East India Company when they took control of the country, as discussed below.[4]

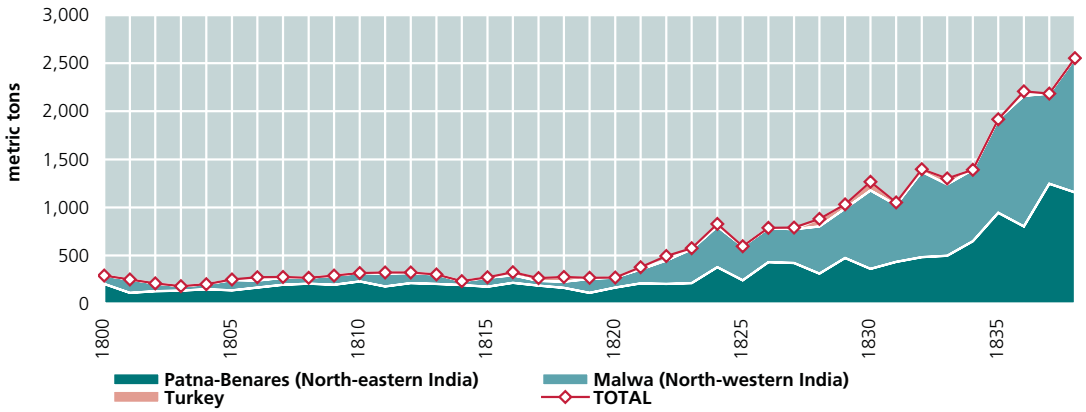
The impact of the opium trade was dramatically altered by the introduction of a new method of ingestion – smoking – at the end of the 17th century. This habit, linked with the spread of tobacco smoking, presented greater addiction potential than when the opium was eaten, the traditional means of consuming the drug. In contrast to India, where opium eating had a long history, smoking proved popular in China,[5] and this may be one reason why the drug proved far more problematic for the latter than the former. Both the tobacco and opium trades in Asia were controlled in this era by the Dutch East Indian Company, which took over the Portuguese trading posts in India in 1602.

Opium use spread rapidly along the coastal areas of China in the 17th century, and the first wide-scale opium addiction problem was detected in the port of Amoy (Xiamen) in Formosa (Taiwan) in 1683.[6] In response to rising addiction levels, Chinese emperor Yongzheng issued a decree banning the import and sale of opium in 1729, threatening violators, inter alia, with confiscation of their ships. Around 13 mt of opium were imported into China at the time.[7] The ban was initially vigorously enforced, and had the effect of both slowing the spread of the problem and dramatically increasing prices. It also marked the beginning of the opium smuggling industry.

Chinese vigilance dropped in second half of the 18th century, and illegal imports of opium into China doubled as compared to six decades earlier.[8] This prompted Chinese emperor Jiaqing to once again ban the smoking of opium (1796) and its importation (1800).[9] Opium was also banned in several other South-East Asian countries by the beginning of the 19th century, including Siam (Thailand), Burma (Myanmar) and Vietnam, as well as in parts of Java and Sumatra (today's Indonesia).[10] These bans encountered tremendous resistance from European traders intent on penetrating Asian markets.

Chinese addiction did not reach epidemic proportions, however, until the end of the 18th century, when the lion's share of the trade fell into the hands of the British East India Company. Founded in 1600, the British East India Company was given monopoly privileges by the Crown on trade with the East Indies. The British first

Fig. 1: Imports of opium* into China (port of Canton), 1800/01 – 1838/39



* Original data converted into mt using 1 chest = 140 lbs = 63.5 kg.
Source: Michael Greenberg, *British Trade and the Opening of China*, 1800-1842, Cambridge 1947, p. 220-21 quoted in Carl A. Trocki, *Opium, Empire and the Global Political Economy, A Study of the Asian Opium Trade,* 1750-1950, 1999, p. 95.

arrived in China in 1637 and in 1715 were allowed to open a trading station in Canton.[11] But they only began to aggressively market opium after they took control of the main opium producing areas of India in the mid-18th century.

The Battle of Plassey (1757) pitted a chartered company (the British East India Company) against the Nawab of Bengal, and the Company's victory is seen as the beginning of two centuries of British rule in India. It also secured for the Company the main opium producing areas of India (Bengal and Bihar).[12] In 1773, the Company claimed monopoly rights on the opium trade in order to fund the rising military expenditures associated with conquering the rest of the subcontinent.[13]

Since importing opium into China directly had been banned, the drug was sold in Calcutta to licensed merchants, who shipped the opium to British-owned warehouses in the free trade area in Canton (Guangzhou). From here, the opium was smuggled by Chinese traders – often with the help of corrupt customs officers – outside the British zone and to the rest of the country.[14] The British East India Company was thus able to deny responsibility for importing opium and retain its other trading rights with China.[15] Opium was also shipped to other locations along the Chinese coast but outside territorial waters, where it was smuggled into the country aboard local boats.

Fed by this trade, India became the world's largest opium producer by the beginning of the 19th century. By the end of the 18th century, nearly a third of Bengal's opium production was exported to South-east Asia and China.[16] In 1729, around 13 mt were exported to China, increasing to around 64 mt by 1767 and over 115 mt by 1798.[17] But the real expansion of the opium trade only started after 1820, when the British East India Company began to lose its grip on its monopoly – a process that started in 1813 and was completed by 1834.

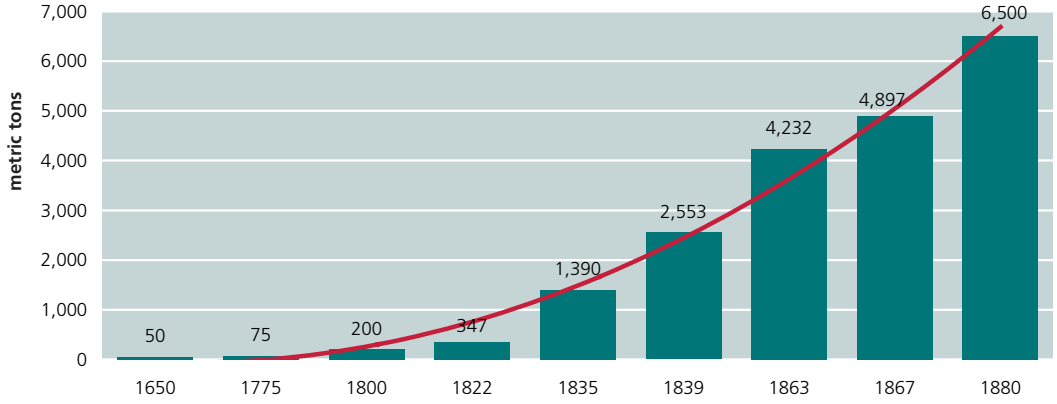
Under the monopoly, it made sense to limit production in order to keep prices high. Once the monopoly disappeared, sales and profits of merchants were optimised by much higher levels of production. In order to prevent potential competition from Turkey and Persia – who were attempting to penetrate the Chinese market with the help of US merchants – production of opium in India was drastically increased. The area under opium poppy cultivation in Bengal (India), for instance, was increased from about 36,400 hectares in 1830 to 71,200 hectares by 1840 and close to 200,000 hectares by 1900.[18]

As a consequence, opium prices fell drastically. Expressed in Spanish silver dollars, the price of a chest[a] of opium from Patna (Bihar) fell from $2,500 in 1822 to $585 in 1838. This enabled a larger proportion of the Chinese population to become addicted to opium, resulting in much higher sales volumes.

Despite the Chinese opium ban, opium exports from India to China rose from just 75 mt in 1775 to just under 300 mt by 1800 and more than 2,500 mt by 1839. The opium trade became so important that traditional ships were no longer sufficient to bear the volume of the flow. They were superseded in the 1830s by specially designed 'opium clippers' which were heavily armed to protect their high-value cargo from pirates (or the Chinese authorities) and much faster than traditional ships, reducing transport time by two thirds. Instead of making one trip from India to China and return per year, opium clippers could make three trips,

a 1 chest = 140 lbs = 63.5 kg.

Fig. 2: Opium Imports* into China, 1650-1880



* Original data converted into mt using 1 chest = 140 lbs = 63.5 kg; 1 picul = 60.453 kg
Sources: Thomas D. Reins, "The Opium Suppression Movement in China", *Modern Asian Studies*, Vol. 25 No. 1, 1991; Michael Greenberg, *British Trade and the Opening of China, 1800-1842*, Cambridge 1947, Fred W. McCoy, *The Politics of Heroin*, New York 1991.

from either side of India, and were thus able to transport ever larger quantities of Patna and Malwa opium to China.[19]

Opium proved to be the wedge the Western powers had been seeking to prise open the Chinese market, which had heretofore proven nearly impenetrable. China had many things the West desired, such as silk and porcelain, but wanted little the West could provide, and a massive trade imbalance resulted in the rapid growth of Chinese silver reserves. The opium trade slowly shifted this balance, with long term implications for the Chinese economy and society.

The Chinese authorities attempted to react to this situation by cracking down on opium imports. Following the first edict of 1729 and the edict of 1799, the Chinese Emperor decreed even stricter laws against the importation and sale of opium in both 1814 and 1831,[20] though without much success. Opium addiction began to capture members of the upper classes and a growing number of high-ranking military officers. Corruption also spread. By 1839, tensions between China and the foreign interests that were pumping opium across its borders had reached crisis proportions, and the Opium Wars were the result.

While other issues dogged Sino-British relations in the early 19th century, the opium trade played a key role in the conflicts to come.[21] In 1839, the emperor issued an edict ordering the seizure of all the opium in Canton, including that held by foreign governments. British traders alone lost 20,283 chests of opium[22] (around 1,300 mt), without compensation. For comparison, annual imports of opium into England amounted to less than 300 chests or 18-20 mt a year at the time.[23]

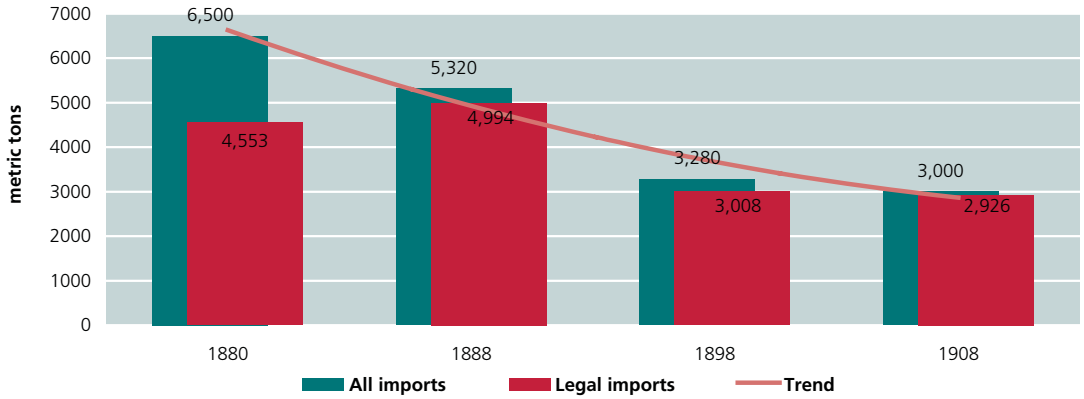
The British response was to attack the Chinese coast, with the navy taking Canton and other towns up the Yangtze river. Defeated, the Chinese were forced to sign the Treaty of Nanking (1842), ceding Hong Kong to the British, opening five new ports to foreign trade, and paying a hefty indemnity.[24] The opium trade itself was not dealt with in the treaty.[25] Opium remained officially illegal in China, but the Chinese authorities were left with very little scope to combat the trade, particularly where foreign interests were concerned.

The Chinese smugglers quickly took advantage of this awkward situation, having their vessels registered in Hong Kong as British ships in order to deter official interference. This charade was the basis for the second Opium War, when, in 1856, a Chinese craft flying the British flag was seized for involvement in piracy and smuggling. Once the ship was taken to port, the Chinese crew was arrested and the English flag was torn down. The British navy, supported by French troops, retaliated, ultimately taking Beijing and burning the imperial summer palace. In the resulting treaty of Tientsin (1858), China was, inter alia, forced to fully legalize the importation of opium.[26]

With the legal impediments finally removed, opium flooded into a hungry Chinese market. Opium imports from India rose from some 2,500 mt at the time of the outbreak of the first opium war (1839) to 6,500 mt by 1880. While British India remained the key supplier, the Chinese also consumed significant amounts of opium produced in Turkey, Egypt, Persia, and the Balkans.[27]

Forced to legalise importation and facing dwindling foreign reserves, the Chinese were compelled to reconsider the question of domestic opium production. Provincial authorities began to permit, and tax, domestic opium cultivation, despite the fact that the practice was

Fig. 3: Opium imports into China, 1880-198



Sources: International Opium Commission, *Report of the International Opium Commission*, Shanghai, China, February 1 to February 26, 1909, Vol. II, Reports of the Delegation, Memorandum on Opium in China, pp. 46-47, Observatoire Géopolitique des Drogues, *Atlas Mondial Des Drogues*, Paris 1996, p. 27 and Thomas D. Reins, Reform, Nationalism and Internationalism, "The Opium Suppression Movement in China and the Anglo-American Influence, 1900-1908", *Modern Asian Studies*, 25 (1), 1991, p. 114.

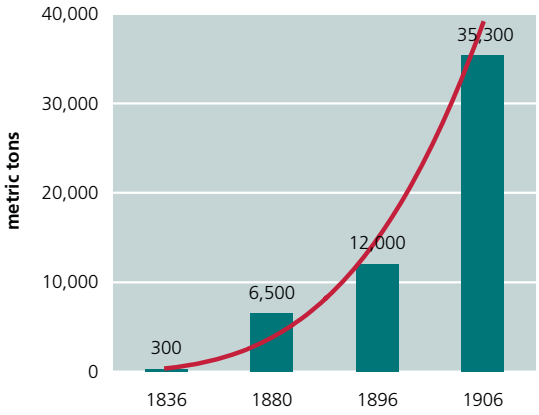
kept officially illegal by the central government until 1890.[28] This policy quickly began to show results – overall opium imports appear to have halved between 1880 and 1908; legal opium imports fell by more than third,[b] with serious consequences for the opium related income of British India. While in 1880, opium-related income represented 14% of aggregate revenue of India, the proportion fell to 7% by 1905. Between 1894 and 1905 opium-related income declined from around £5 million to £3 million.[29]

In comparison, duties on opium imports and transit taxes on foreign opium in China amounted to about 5-7% of the central government's total revenue over the 1887-1905 period.[30] After the Chinese Government levied a consolidated tax on both foreign and domestic opium in 1906, income almost tripled, equivalent to around 14% of the annual central government income.[31] Though this was a lower proportion than in several other Asian countries, it was still significant and appeared to be much needed in times of huge fiscal deficits.

The *de-facto* legalization of opium poppy cultivation at the provincial level led to a gradual increase in production, but all stops were removed when the practice was officially recognised in 1890, and production skyrocketed. Even before the import ban was lifted, about 300 mt were produced in China. By 1880, domestic production was reported to have slightly exceeded imports. After legalisation, opium production in China exploded, peaking in 1906 at a record high of more than 35,000 mt, according to the Chinese delegation to the International Opium Commission of Shanghai (1909).[c]

Thirty-five thousand mt is an enormous amount of opium by any standard. Afghanistan, which produces over 95% of the world's illicit opium today, generated less than 9,000 mt in 2007. British-India produced

Fig. 4: Domestic opium production in China, 1836-1906

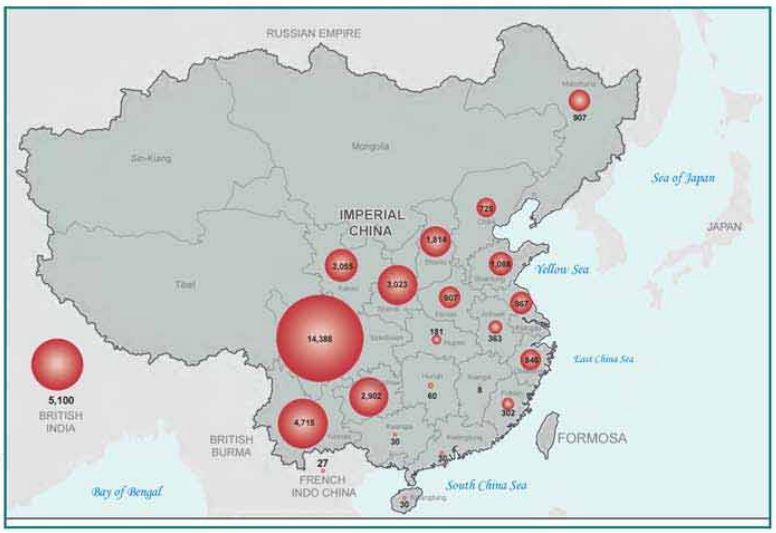


Sources: Carl A. Trocki, *Opium, Empire and the Global Political Economy*, New York 1999, p. 96, Observatoire Géopolitique des Drogues, *Atlas Mondial Des Drogues*, Paris 1996, p. 27 and *Report of the International Opium Commission*, Shanghai, China, Feb.1-Feb. 26, 1909, p. 119.

b According to data supplied by the Chinese delegation to the International Opium Commission in 1909, the decline between 1880 and 1908 amounted to 36% (from 4,553 mt to just over 2,900 mt). (See: International Opium Commission, Report of the International Opium Commission, Shanghai, China, February 1 to February 26, 1909, Vol. II, Reports of the Delegation, China, Memorandum on Opium from China, p. 51.). Other sources, however, indicate that there was, in addition to 'legal imports' a a significant amount of 'illegal imports' in 1880 in the sense that the import duties were not properly paid and imports were thus not registered. Such 'illegal imports' however, seem to have largely disappeared by the beginning of the 20th century, so that is seems fair to say that overall opium imports into China declined by about half between 1880 and 1908.

c Production estimates for 1906 were derived from customs reports and were thus generally considered to be more reliable than consumption estimates.

Map 1: Opium production in 1906/07 in India, Indochina and China (by province) in kg



Sources: Opium production data from *International Opium Comission*, 1909; historical boundaries of China from CHGIS, Version 4, Cambrigde: Harvard Yenching Institute, Jannuary 2007.
Note: The boundaries and names shown and the designation used on this map do not imply official endorsement or acceptance by the United Nations.

some 6,350 mt at its peak in 1880. Facing Chinese import-substitution, this diminished to 4,445 by 1905, of which 3,240 mt were exported to China.[32]

Production was reported from 20 Chinese provinces. More than 40% of the total production took place in the province of Szechwan, followed by Yunnan. Yunnan province is located in southern China, bordering Myanmar, and Szechwan province is located north of Yunnan. In other words, more than half of China's opium production took place slightly to the north of the geographical area which would later be known as Golden Triangle (Myanmar, Laos and Thailand), one of the main sources of illicit opium in the 20th century.

The prevalence rate of opium consumption in China also skyrocketed in the 19th century, from about 3 million opium smokers in the 1830s[33] to 15 million opium addicts by 1890,[34] or about 3% of the population at that time. According to the Chinese delegation to the International Opium Commission of Shanghai (1909), this increased to about 21.5 million by 1906.[35] Others put the number close to 40 million people in 1890, or about 10% of the population, growing to unknown levels from there.[36] According to official Chinese figures, opium consumption affected 23.3% of the male adult population and 3.5% of the female adult population of China in 1906.[37] Other estimates ranged from 13%[38] to 27%[39] for the male adult population of the country. By any estimate, China was consuming between 85% and 95% of global opium supply at the beginning of the 20th century. Never before or since has the world known a drug problem of this scale and intensity.

Opium use also apparently affected Chinese populations outside China. In the USA, for instance, some estimates suggested that 30 percent of adult males of Chinese origin were addicted to opium smoking.[40] Even higher proportions were reported for Chinese living in a number of South-East Asian countries.

2.2 The foundation of an international drug control system

The Chinese opium crisis was the product of a distinct set of historical circumstances, not some laboratory experiment in unchecked drug markets. Still, many forget that there was once a country where perhaps one in four men was a drug addict, and that the world was able to address this problem through collective action. The international drug control system was born out of a very real humanitarian emergency, a catastrophe that only happened because of the lack of global norms and standards. It proved that it is possible to agree to common terms on issues of common concern, and cooperate to ensure common security even when this might prove costly for individual interests. It set rules on the conduct of nations, and so set the stage for many other international efforts to follow.

The reform movement was rooted in popular revulsion to the immorality of the opium trade, and calls for action grew as the 19th century progressed. The issue drew together some strange bedfellows, including conservative religious groups, Chinese nationalists, and left-wing critics of the impact of unfettered capitalism, the Victorian predecessors of today's anti-globalisation lobby. Not surprisingly, many of the most influential protests came from faith-based communities. In 1874, for instance, a group of Quaker reformers in London formed the "Society for the Suppression for the Opium Trade", which emerged as an effective pressure group in the UK.[41] Methodists, Baptists, Presbyterians, Unitarians and other dissenting churches adopted this cause.

Parishes and convocations held meetings and submitted numerous mass petitions in support of the 'anti-opiumists'.

In response to popular sentiment, members of the British Parliament introduced a series of anti-opium resolutions between 1875 and 1890, calling for the abolition of the opium trade and its prohibition in India. Though all were defeated, their impact on the political discourse was lasting. The British Government decided to study the opium problem in more detail. In 1893, a *Royal Commission on Opium* was formed to examine:

- whether poppy growing and the sale of opium should be, except for medical purposes, prohibited in India;
- what the cost of prohibition would be for India;
- what effect opium use was having on the moral and physical condition of the people; and,
- what Indians themselves felt about prohibition.

In its 1895 report, the Royal Commission on Opium concluded:

- the prohibition of opium save for medical purposes was neither necessary nor wanted by Indians and that the British Government should not interfere with opium production and consumption in India;
- India could not afford to give up the opium revenues as, "the finances of India are not in a position to bear the charges or compensation, the cost of necessary preventive measures and the loss of revenues"; and,
- the consumption of opium by the people of India did not cause "extensive moral or physical degradation" and that the disentangling medical from non-medical consumption was not practical.[42]

The conclusions of the Commission resulted in the maintenance of the *status quo* for a few more decades. They were, of course, heavily criticized by anti-opium reformers, who claimed that the composition of the Commission had been biased, favouring from the very start the economic interests of the Government of British-India.[43] They felt biased commissioners had whitewashed the Indian opium question[44] and simply defended the *status quo*.[45] While only two out of seven members were 'anti-opium reformers', the Commission collected valuable information in a rigorous manner from a broad range of key informants (723 witnesses), including medical doctors, police officials, military officers, representatives from local governments, various officials from the opium producing states, lawyers, journalists, landowners, planters, merchants and missionaries. Thus, its findings are still worthy of review.[46]

The conclusions of the Commission were in keeping with the testimony they heard, and the only dissenting views came from missionaries and circles close to the temperance movement. One bishop of the Methodist Episcopal Church in India claimed that, "at least half of the opium users took it in excess with ruinous effects on their health, their morals and their finances,"[47] but most witnesses were more cautious in their statements. Opium use in India at the time was found to be a habit of mainly middle-aged and older men. Its use was found to be widespread but individual consumption levels appeared to be rather low, and this mitigated the social impact.

The Commission calculated that the bulk of Indian opium users (70%) consumed between 188 and 945 grams a year and only a small proportion (10%) consumed more than 945 grams a year. Data from 4,000 opium eaters in Rajputana indicated an average daily dose of 1.4 grams or about 0.5 kg per year. Later studies from Calcutta found similar use levels: about 0.63 kg per year. This was far more moderate than consumption patterns reported from other countries. For example, official estimates on opium use in China a decade later indicated average consumption levels of between 0.84 kg[d] and 2.2 kg[e] of opium per year, with daily consumption levels ranging from 3.78 grams for light smokers to 15.1 grams for heavy smokers.[48]

The overall perception arising from the report was that the consequences of opium consumption in India were not that different from the alcohol abuse problem faced by the UK at the time. The high price of opium in India apparently led to low consumption levels, less than half those seen in China. Further, the mode of consumption (eating instead of smoking) may have contributed to the relatively minor impact of the drug.[49] Of course, the Commission's findings were limited to the impact of the trade on the people of India, and did not delve into the impact of the trade on China. Locked into the geographic limitation of its terms of reference, it was impossible for the Commission to recognise the devastation the trade they had exonerated was wreaking in other parts of the world.

All of this pointed to the need for a global drug control system, but conflicting interests among the major powers made negotiation of such a system impossible. China's attempts to ban opium poppy did not work as long as

d This estimate is derived from the amount of 491,133 piculs (29,637 mt) available for consumption in 1906 and an estimate of 25 million opium users. (See: International Opium Commission, *Report of the International Opium Commission*, Shanghai, China, February 1 to February 26, 1909, Vol. I, Minutes of the Proceedings, p. 68. and International Opium Commission, *Report of the International Opium Commission*, Shanghai, China, February 1 to February 26, 1909, Vol. II, Reports of the Delegation, China, Memorandum on Opium from China, p. 66.)

e This estimate is derived from the amount of 491,133 piculs (29,637 mt) available for consumption in 1906 and an estimate of 13.46 million opium smokers in China in 1906. (See International Opium Commission, *Report of the International Opium Commission*, Shanghai, China, February 1 to February 26, 1909, Vol. II, Reports of the Delegation, China, Memorandum on Opium from China, p. 66.)

opium was produced in India and merchants were ready to ship this opium to China. The British authorities, in turn, repeatedly pointed out that a reduction of opium production in India would have no positive impact on the situation in China as domestic production in China was already increasing and Turkey, Persia and other countries could easily make up the difference, with the help of eager European partners.

The global anti-opium lobby networked internationally and awaited a political window of opportunity to advance their cause. Their chance came after 1906, when the British Liberal Party, which had opposed opium on moral grounds since the mid-19th century, defeated the Conservatives, who had traditionally defended British business interests. As one of the first moves after gaining a majority in the House of Commons, the Liberals passed a resolution calling for the end of the Indo-Chinese opium trade.[50]

The topic of opium reform reacquired currency in the USA following the occupation of the Philippines in 1898, which included the acquisition of a large ethnic-Chinese opium addict population. The US authorities found that Manila alone had some 190 opium dens retailing a total of 130 mt of opium per year. Under Spanish rule, the opium trade in the Philippines had been farmed out to state-licensed opium monopolies. Taxes from the industry generated a substantial portion of the government's revenue, and it had been proposed that the U.S. maintain this system. The proposal was within two weeks of being adopted when it was derailed by a last-minute campaign by Manila's missionaries, appalled at the notion that the U.S. might sanction the opium evil. They contacted the International Reform Bureau, a prohibitionist missionary lobby in Washington, which immediately dispatched some two thousand telegraphic petitions to prominent supporters, calling on President Theodore Roosevelt to block the move.[51] President Roosevelt, impressed by this outburst of public moral indignation, ordered the Philippines government to withdraw the legislation for further study.

An Opium Committee for the Philippines was appointed in 1903, including the Episcopal Bishop of Manila, Reverend Charles Brent, a Canadian national, who would later become a key figure in the international opium reform movement. After reviewing the approach to the trade taken in nearby countries,[52] a number of opium regulation policies were considered. The committee concluded that progressive prohibition by a government monopoly offered the best chance of bringing opium under control. Under the Committee's proposal, the period of government monopoly would last three years. During this time, the cultivation of opium in the Philippines would be made progressively illegal, opium dens would outlawed, and the use of opium by persons under the age of 21 prohibited. The gradual detoxification of addicts would be accomplished by strict government control of the opium supplies.[53] The report was finished in 1904 and in 1905 the US Congress adopted its recommendations, passing legislation entitled, "An act to revise and amend the tariff laws of the Philippine Islands, and for other purposes". The Act empowered the Philippine colonial government to "prohibit absolutely the importation or sale of opium, or to limit or restrict its importation and sale, or adopt such other measures as may be required for the suppression of the evils resulting from the sale and use of the drug."[54]

While the U.S. could control conditions inside the Philippines, the large-scale production of opium and its trafficking across Asia had the potential to endanger the success of domestic policy. It became increasingly clear that unilateral action would not lead to success. The US was also interested in improving relations with China, and by adopting the anti-opium cause, it could accomplish several objectives simultaneously.

Finally, reform became possible because the nature of the Chinese opium market had changed. Import substitution had worked, imports were declining, and reports were emerging that China was actually exporting opium from its southern provinces to neighbouring territories in British Burma and French Indochina. It appeared that it was only a matter of time until the world's largest opium producer would emerge as the world's largest opium exporter.

During this same period, China changed its political approach from one of confrontation towards one of quiet diplomacy. In the wake of the Boxer Rebellion (1900), Beijing slowly and cautiously worked on getting Western help to restrict foreign drug activities in China. In September 1900, for example, the Chinese authorities requested that France take steps to halt the smuggling of opium, morphine and drug paraphernalia from the French Concession at Shanghai. One by one, agreements were secured from Western governments to prohibit opium importation, often as riders to commercial treaties.[55] While these bilateral agreements were not enough to stop the trade, they did provide a basis for anti-opium activists to take their cause to the international stage.[56]

2.2.1 The Shanghai Opium Commission, 1909

The first international conference to discuss the world's narcotics problem was convened in February 1909 in Shanghai. This forum became known as the 'Opium Commission' and laid the groundwork for the elaboration of the first international drug treaty, the International Opium Convention of The Hague (1912).[57] Preparations for the Shanghai conference started in 1906. The original plan was to limit the conference to

the situation in Asia, but a number of parties argued that the issue could not be properly discussed unless all the major producing, manufacturing and consuming nations attended. There was also concern about the degree to which delegates would be empowered to make agreements on behalf of their national governments. The invitation list was thus expanded, and it was agreed that the invited delegates would only act in an advisory capacity to their respective governments.[58] This compromise allowed most of the colonial powers at the time to attend, including Great Britain, the USA, France, the Netherlands, Portugal, Germany, Austria-Hungary, Italy, Russia, Japan, China, Persia (Iran) and Siam (Thailand).[59]

Remarkably, the Commission appeared to be having an impact even before the delegates convened in Shanghai. The mere fact that a meeting of this sort was to take place prompted considerable reform, implemented so that countries could show progress when the detailed statistics were laid on the table. These initiatives ranged from changes in the control regime to an outright ban of opium poppy cultivation. In the British controlled territories of Malaya, for example, a Commission on Opium was created in 1907, two years in advance of the Commission. The opium farms in Singapore, Penang and Malacca were suspended as of 31 December 1909. The Government Monopolies Department then entered into possession of the premises and reopened them with a view to pursuing a policy of gradual suppression of opium-smoking in these territories.[60]

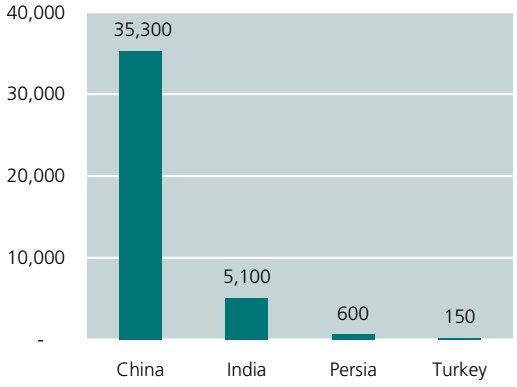
The most important initiative made in advance of the Commission, however, was the bilateral agreement which bound Britain to gradually eliminate its opium sales to China between January 1908 to the end of 1917. China, in return, had to promise to have its opium poppy cultivation eliminated within the same ten year period.[61] Under the agreement, Britain would reduce its exports to China by 10% annually under the condition that China reduced its domestic cultivation at the same rate. To allay the fears that unreported domestic production might upset the scheme, British officials were given the right to undertake independent verification missions, starting three years after the start of the implementation of the agreement. The inspector, nominated by London, was given unlimited access to the interior of China.[62] In order to demonstrate its seriousness to the British authorities, the Chinese Government started a major anti-drug campaign.[63] This opium suppression campaign was later described as "the most successful of all the Manchu reforms."[64] The Chinese authorities also issued an edict in 1906, which, while not banning opium outright, set out a clear process by which both opium production and consumption would be reduced over the next decade.

Thus, when the delegations at the first international drug conference in Shanghai convened in 1909, they could already report on major successes in reducing the opium problem. The Chinese delegation could report a strong decline of domestic opium production (-37%) from 35,400 mt in 1906 to 22,200 mt in 1908. This process became even more pronounced after the Shanghai conference, as Chinese efforts to curb production resulted in a further 82% decline by the end of the imperial regime in 1911.[f]

In parallel, a large number of countries/territories reported significant declines in their opium imports and sales prior to 1909, including Formosa (Taiwan), French-Indochina, Siam (Thailand), Burma (Myanmar), and the Philippines, suggesting that the preparation of an international conference on the opium topic had already prompted the authorities of many countries to become more vigilant.

At the Commission itself, for the first time, a detailed global overview of the world's drug situation was provided and the representatives from the various nations were able to engage in an open dialogue on this basis. Information was shared regarding the trade, consumption and financial aspects of the opiates market, and these data provide a basis for comparison with the situation today. Total opium production was estimated at around 41,600 mt in 1906/07,[65] almost five times more than global illicit opium production a century later.

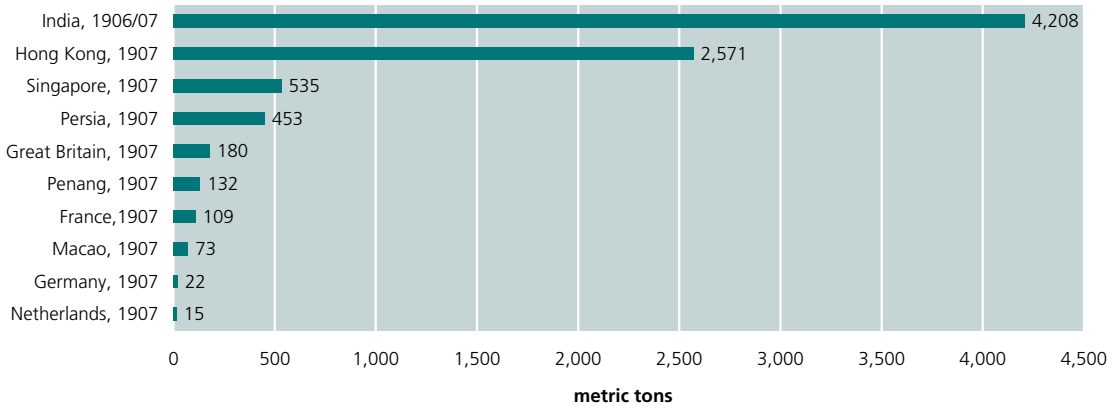
Fig. 5: Opium production estimates for 1906/07 (in mt)



Source: International Opium Commission, *Report of the International Opium Commission*, Shanghai, China, February 1 to February 26, 1909, Vol. II, Reports of the Delegations and Hamilton Wright, "The International Opium Commission", *The American Journal of International Law,* Vol. 3, No. 3, July 1909, pp. 648-673.

f If this process had continued, China could have eliminated opium production even before the planned 10-year period. The overthrow of the imperial government by a nationalist revolt in 1912, reversed, however, this downward trend as the new nationalist government in Beijing was unable to control the provinces where local warlords promoted the cultivation of opium poppy to strengthen their position.

Fig. 6: Raw opium exports* (from domestic production and imports), 1907



* Original data converted into metric ton equivalents.
Source: International Opium Commission, *Report of the International Opium Commission*, Shanghai, China, February 1 to February 26, 1909, Vol. II, Reports of the Delegations.

Not surprisingly, China was revealed to lead the world in opium production, with about 35,000 mt produced in 1906, around 85% of the world total. Despite this bumper crop, China still imported 12% of its national supply in 1908, mostly from India.[66] The world's second largest opium producer was India, with about 12% of the world total. Total production in Bengal was reported to have amounted to more than 3,400 mt of opium in 1906/06. About 1.5 million farmers made their living from opium production in Bengal alone.[67] The next largest producer was Persia, modern day Iran. Annual production in Persia was estimated at around 600 mt or 1½% of the world total. Some 25% of this output was consumed domestically and 75% (≈450 mt) was destined for export. Persian opium was reported to have been next in quality after Indian opium.[68]

While invited, Turkey did not attend the conference. However, the head of the US delegation reported later that estimates available to the US delegation suggested that Turkey produced some 2,300 'cases' of opium in 1907. Assuming that the measurement of a 'case' was equivalent to that of a 'chest', the typical measure for opium at the time, Turkey would have produced around 150 mt of opium in 1907. The US delegation believed that this was exceptionally low and that in a normal year Turkey would produce between 5,000 and 6,000 cases (320-380 mt) and in very good year up to 8,500 cases (540 mt).[69] Turkish opium was characterized by a high morphine content and was thus widely used for export to Europe or America for medicinal purposes. Production in other countries was far more moderate. The French authorities estimated that, at most, Indochina might have produced between 24 to 30 mt annually. It was estimated that an additional 20 to 25 mt of opium were smuggled from Yunnan province (China) into French-Indochina.[70] Opium production was also reported by the British authorities to be taking place in the geographical area of present day Myanmar: in Kachin villages and in the Shan State, the main opium producing regions of Myanmar today.[71]

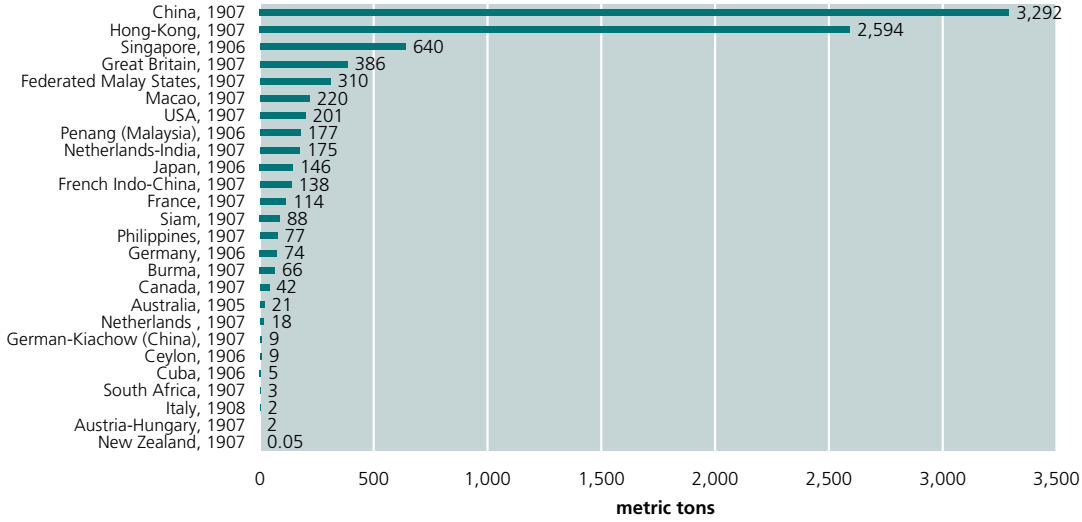
Opium production in Afghanistan, today the world's largest opium producer, was not investigated at the Shanghai conference. This reflects the fact that all information available at the time suggested that opium production in this country was still very modest, largely restricted to the north-eastern parts of the country (Badakshan), and not for export.[72]

Trade

Data presented at the Shanghai conference also enabled the identification of the main opium trade flows. The largest opium exporter at the time was clearly India. Exports of Indian opium in 1906/07 amounted to 4,200 mt, suggesting that 82% of total production was destined for export. Exports in 1906/07 went primarily to China (76%), followed by exports to the Strait Settlements: Singapore and parts of present-day Malaysia: Malacca, Penang, and Dinging (20%).

The second and third largest exporters identified were Hong-Kong and Singapore, which were primarily re-exporters rather than major producers of the drug. Hong Kong's exports went primarily to China (86%). Shipments to destinations outside China accounted for 14% of the total and went mainly to Macao (8%, which again re-exported to China) and to the Philippines (2%). Smaller amounts went also to London, Victoria, the Straits Settlements, Vancouver, Panama and New York. The world's second largest producer/exporter was Persia, shipping some 450 mt to markets abroad. Most of the exports went to the Straits Settlements and Hong Kong

Fig. 7: Raw opium imports (including for re-export)*, 1907



* Original data converted into metric ton equivalents.
Source: International Opium Commission, *Report of the International Opium Commission*, Shanghai, China, February 1 to February 26, 1909, Vol. II, Reports of the Delegations.

(about two thirds), followed by exports to the UK (about a quarter). The rest went to continental Europe and Africa.[73] The third largest exporter was most probably Turkey, though comprehensive export statistics from this country were not made available since Turkey did not attend the conference.

Import statistics were actually quite a bit more comprehensive than the export figures:

- China led the list among importers (3,300 mt), followed by Hong Kong (2,600 mt) and Singapore (some 640 mt), both of which re-exported to China.
- The largest European importer of opium was the UK (386 mt), though the bulk of this was also re-exported;
- Imports of between 200 and 350 mt were reported by the Federated Malay States (now part of Malaysia), Macao and the USA; opium shipped to Macao was again mainly for re-export;
- Imports of between 100 mt and 200 mt were reported by Penang (now part of Malaysia), Netherlands-India (now Indonesia), Japan, French Indochina (now Vietnam, Laos and Cambodia) and France;
- Imports of between 50 and 100 mt were recorded by Siam (Thailand), the Philippines, Germany and Burma;
- Imports of between 10 and 50 mt went to Canada, Australia and the Netherlands;
- At the low end, with imports of less than 10 mt, were Ceylon (now Sri Lanka), Cuba, South Africa (Natal and Cape), Italy, Austria-Hungary and New Zealand.

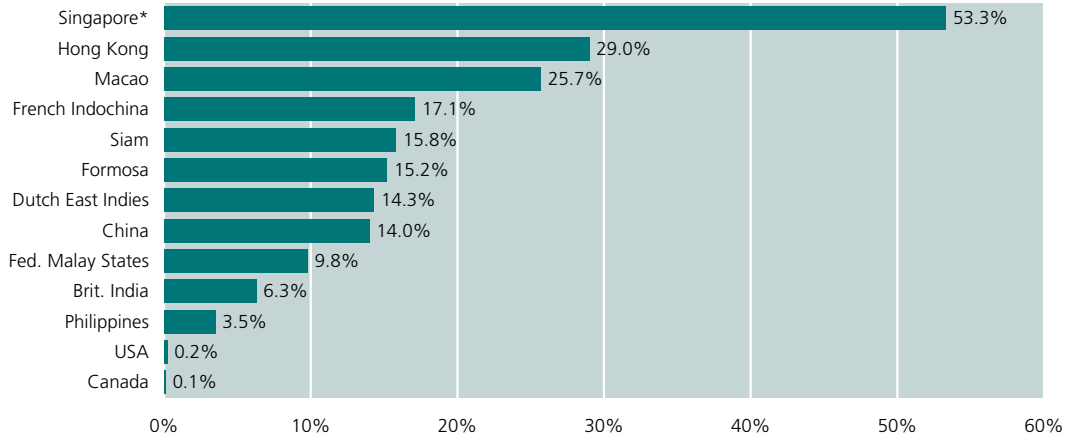
Total reported imports amounted to some 8,800 mt. A century later, the corresponding global figure of legal opium imports had fallen to less than 500 mt (467 mt in 2006).[74] This reflected lower production levels of opium as well as less opium trade. The re-export of legally imported opium is nowadays the exception, rather than the rule.

Consumption

In addition to collecting data on the trade, the Commission gathered information on the amount of opium consumed in various countries. These reports do not provide us with a complete picture of global consumption, but they do provide some basis for a very rough estimate.

China was home to the greatest number of users, with estimates at the conference ranging from a very conservative estimate of 13.5 million[75] opium smokers to 25 million opium users (3.4%-6.3% of the total population). The Commission finally recorded the figure of 21.5 million users (5.4% of the population). This suggests consumption levels of about 1.4 kg of opium per user per year – a high figure compared to other national estimates. Similar figures were found for Chinese populations located in areas not controlled by the Chinese government. For example, the number of licensed opium smokers in Japanese-administered Formosa (Taiwan)

Fig. 8: Opium related revenues as a percentage of total (state) revenues, 1906/07



Source: *Report of the International Opium Commission*, Vol. 2, "Report of Committee on Trade Statistics," pp. 355-365, Shanghai, 1909

amounted to 169,064 in 1900 (6.3% of the total population), falling to 113,165 by 1907 (3.7%). This was a well-monitored population, which consumed 1.29 kg per user per year over the 1897 to 1907 period.[76]

Similarly high levels of opium consumption were reported for mostly adult male Chinese labourers (totalling 118,000) working in the United States. The US authorities reported that the bulk of the country's opium imports (94%) were for Chinese labourers working in the USA. They estimated that 15% of the workers were heavy smokers at 2.72 kg per user per year, another 20% were light smokers at 0.68 kg, and a further 10% were social smokers at 28.35 grams. Thus, close to 45% of Chinese labourers were estimated to be opium users, with an average annual consumption rate of 1.22 kg per user.[77] It was later suggested that the share of workers using the drug may have been less, perhaps 30%, but this would raise the average use level to over 2 kg per user per year.[78]

Consumption levels in non-Chinese populations were estimated to be much lower. For example, French estimates of opium consumption in Vietnam were 0.2 kg per user per year for the Vietnamese population, compared to 1.4 kg for the Chinese population. Legal consumption of opium in the world's second largest opium producing country, British India (excluding Burma), was reported to amount to 422.3 mt in 1907/08. The British authorities admitted that the total could have been higher as this figure only accounted for licit opium consumption and diversions from the licit trade were known to take place. The average normal dose, as identified by the Royal Commission in 1895, amounted to 21.5 grains per person per day (equivalent to about 0.5 kg per year). Based on these data, there were about 830,000 opium users in British-India (excluding Burma) in 1907/08 and an overall prevalence rate of 0.4%. In Burma, the figure appears to have been even lower, at 0.27 grams per user per year consumed by 1.5% of the total population, most likely due to the relatively high prices of opium. [79]

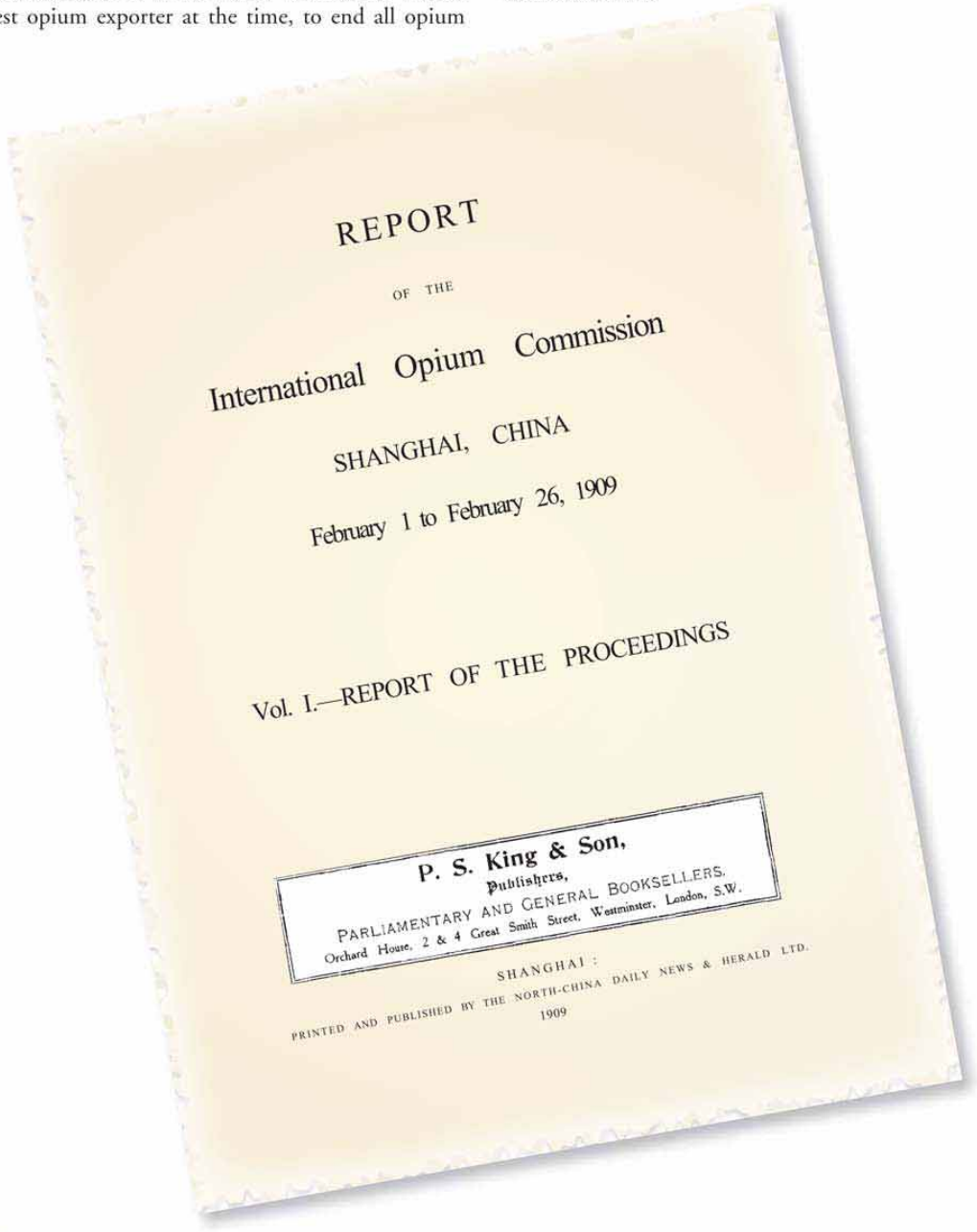
Revenues

Data were also presented at the conference on the revenues generated by the trade, and they illustrate the startling degree to which national governments, and not only the users, were addicted to opium. After the Chinese Government levied a consolidated tax on both foreign and domestic opium in 1906, income from opium was reported to have been about £2.1 (British pounds sterling) in 1906, equivalent to 14% of the annual central government income.[80] And these are just the national figures – opium was also taxed at the provincial level, and this income was said to be worth about £3 million a year.[81] Mr. Leech, the counsellor of the British Legation at Beijing and one of the main experts on these issues at the time, estimated that the Chinese authorities derived in total an income of £6.5 million from opium in 1906, only £1.7 million of which accrued to the national government.[82]

The reported income from the opium production and trade in British India, excluding the so-called 'Native States', amounted to £4.7 million in the fiscal year 1906-07. In contrast to a century earlier, when in some years close to a third of the total state income was derived from opium, the figure was 6.3% by 1906-07.[83] The income was generated from the difference between the production price and the auction price (more than 75%) as well as from auction fees (less than 25%). About 80% of the total export income was generated in trade with China.

The highest proportion of state revenues from opium was reported from Singapore and the other two so-called British 'Straits Settlements', Penang and Malacca (both today part of Malaysia). Opium provided 53.3% of total revenue to these territories in 1906. In 1904, the proportion was even higher, at 59.1% of the total. [84]

Aside from exchanging data and information, the International Opium Commission also made a number of non-binding recommendations for dealing with the trade. It was agreed that it was undesirable to import drugs into a country where their use was illegal. Key was the commitment of India, which was still the world's largest opium exporter at the time, to end all opium exports to jurisdictions that prohibited its import. Appeal was made to the governments controlling foreign concessions in China to co-operate in closing opium dens and applying local drug regulations to the foreign settlements. The Commission also strongly urged governments to take decisive measures to control the manufacture and distribution of morphine, as addiction to morphine was reported to be spreading. While the Commission was not mandated to provide binding agreements, it did set the stage for the signing of The Hague Opium Convention just three years later, which then formally established narcotics control as an element of internatonal law.[85]


REPORT

OF THE

International Opium Commission

SHANGHAI, CHINA

February 1 to February 26, 1909

Vol. I.—REPORT OF THE PROCEEDINGS

P. S. King & Son,
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1909

The following are the Resolutions as adopted, in their revised form :—

BE IT RESOLVED:

1. That the International Opium Commission recognises the unswerving sincerity of the Government of China in their efforts to eradicate the production and consumption of Opium throughout the Empire; the increasing body of public opinion among their own subjects by which these efforts are being supported; and the real, though unequal, progress already made in a task which is one of the greatest magnitude.

2. That in view of the action taken by the Government of China in suppressing the practice of Opium smoking, and by other Governments to the same end, the International Opium Commission recommends that each Delegation concerned move its own Government to take measures for the gradual suppression of the practice of Opium smoking in its own territories and possessions, with due regard to the varying circumstances of each country concerned.

3. That the International Opium Commission finds that the use of Opium in any form otherwise than for medical purposes is held by almost every participating country to be a matter for prohibition or for careful regulation ; and that each country in the administration of its system of regulation purports to be aiming, as opportunity offers, at progressively increasing stringency. In recording these conclusions the international Opium Commission recognises the wide variations between the conditions prevailing in the different countries, but it would urge on the attention of the Governments concerned the desirability of a re-examination of their systems of regulation in the light of the experience of other countries dealing with the same problem.

4. That the International Opium Commission finds that each Government represented has strict laws which are aimed directly or indirectly to prevent the smuggling of Opium, its alkaloids, derivatives and preparations into their respective territories ; in the judgment of the International Opium Commission it is also the duty of all countries to adopt reasonable measures to prevent at ports of departure the Shipment of Opium, its alkaloids, derivatives and preparations, to any country which prohibits the entry of any Opium, its alkaloids, derivatives and preparations.

5. That the International Opium Commission finds that the unrestricted manufacture, sale and distribution of Morphine already constitute a grave danger, and that the Morphine habit shows signs of spreading : the International Opium Commission, therefore, desires to urge strongly on all Governments that it is highly important that drastic measures should be taken by each Government in its own territories and possessions to control the manufacture, sale and distribution of this drug, and also of such other derivatives of Opium as may appear on scientific enquiry to be liable to similar abuse and productive of like ill effects.

6. That as the International Opium Commission is not constituted in such a manner as to permit the investigation from a scientific point of view of Anti-Opium remedies and of the properties and effects of Opium and its products, but deems such investigation to be of the highest importance, the International Opium Commission desires that each Delegation shall recommend this branch of the subject to its own Government for such action as that Government may think necessary.

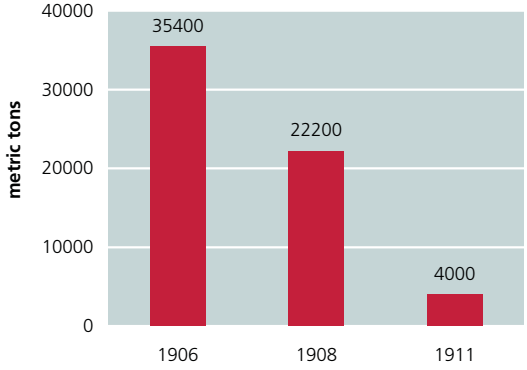
7. That the International Opium Commission strongly urges all Governments possessing Concessions or Settlements in China, which have not yet taken effective action toward the closing of Opium divans in the said Concessions and Settlements, to take steps to that end, as soon as they may deem it possible, on the lines already adopted by several Governments.

8. That the International Opium Commission recommends strongly that each Delegation move its Government to enter into negotiations with the Chinese Government with a view to effective and prompt measures being taken in the various foreign Concessions and Settlements in China for the prohibition of the trade and manufacture of such Anti-Opium remedies as contain Opium or its derivatives.

9. That the International Opium Commission recommends that each Delegation move its Government to apply its pharmacy laws to its subjects in the Consular districts, Concessions and Settlements in China.

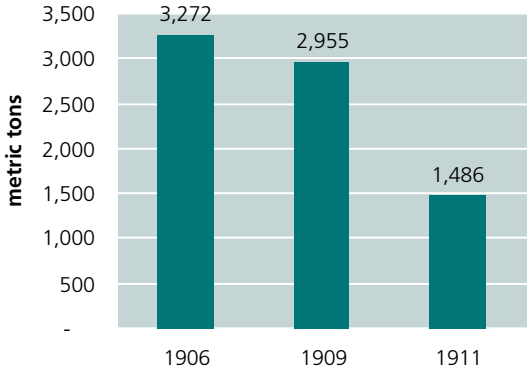
[NOTE.— *The Portuguese Delegation reserved its vote on these resolutions in every instance. With regard to the vote of the Italian 'Delegation, attention is called to the following correspondence.]*

Fig. 9: Total opium production in China, 1906-1911



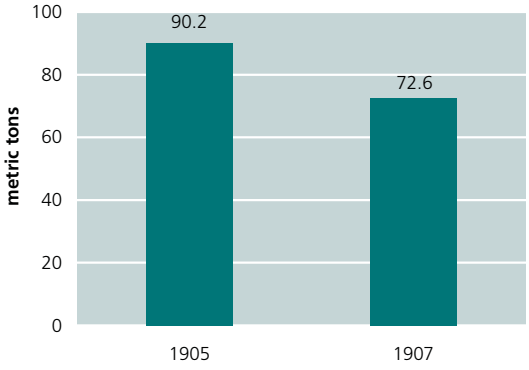
Source: Conférence Internationale de l'Opium, La Haye, 1 décembre 1911 – 23 janvier 1912, p. 57

Fig. 10: Opium imports of China (in mt), 1906-1911



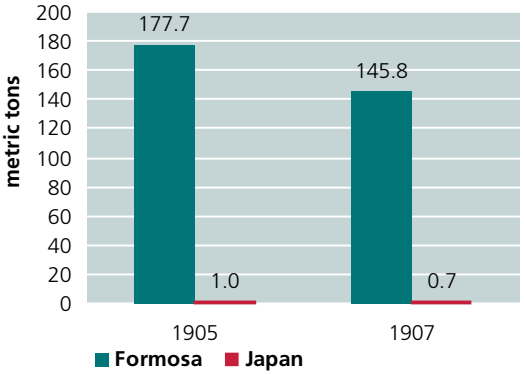
Source: Conférence Internationale de l'Opium, La Haye, 1 décembre 1911 – 23 janvier 1912, p. 67

Fig. 11: Total opium exports of Macao, 1905-1907



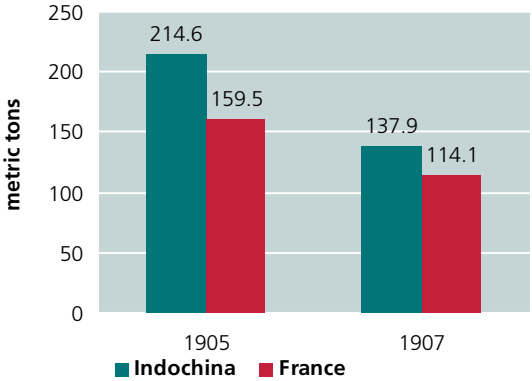
Source: International Opium Commission, Shanghai 1909, Annex 1. Statistics of Trade in Opium.

Fig. 12: Opium imports of Formosa and Japan, 1905-1907



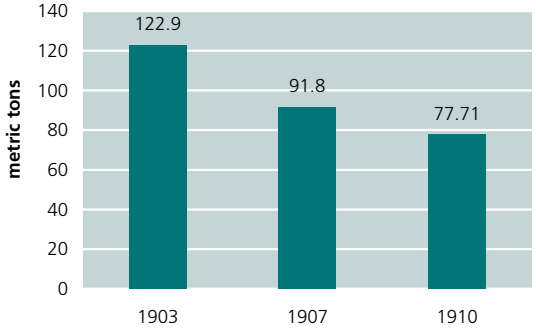
Source: International Opium Commission, Shanghai 1909, Annex 1. Statistics of Trade in Opium.

Fig. 13: Opium imports of France and Indochina, 1905-1907



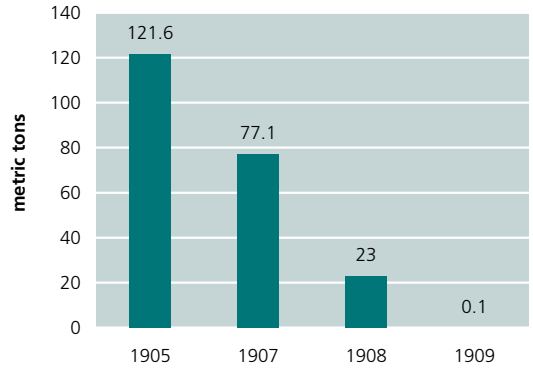
Source: International Opium Commission, Shanghai 1909, Annex 1. Statistics of Trade in Opium.

Fig. 14: Sales of chandu (prepared opium) in Indochina, 1903-1910



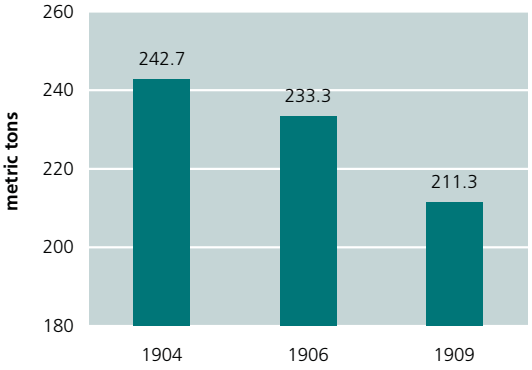
Sources: International Opium Commission, Shanghai 1909, Annex 1. Statistics of Trade in Opium and Conference Internationale de l'Opium, La Haye, 1 décembre 1911 – 23 janvier 1912, Tome II, p. 81.

Fig. 15: Opium imports of the Philippines, 1905-1909



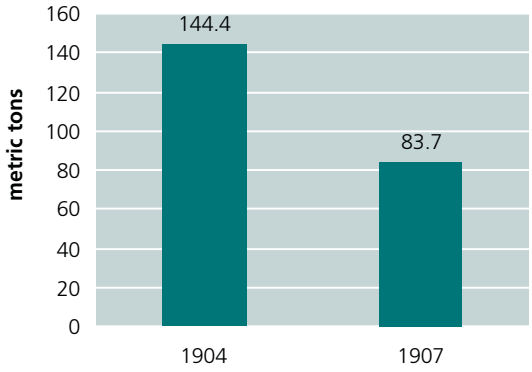
Source: Conférence Internationale de l'Opium, La Haye, 1 décembre 1911 – 23 janvier 1912, Tome II, p. 6.

Fig. 16: Opium imports of the USA, 1904-1909



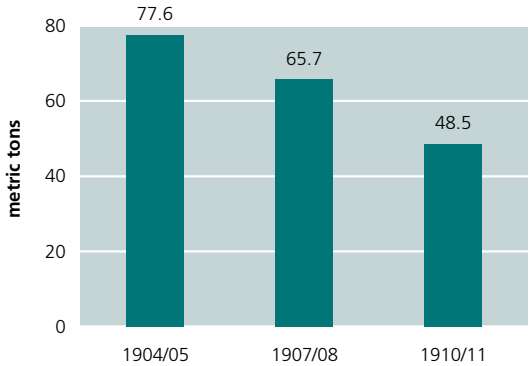
Source: Conférence Internationale de l'Opium, La Haye, 1 décembre 1911 – 23 janvier 1912, Tome II, p. 34.

Fig. 17: Opium imports of Siam (Thailand), 1904-1907



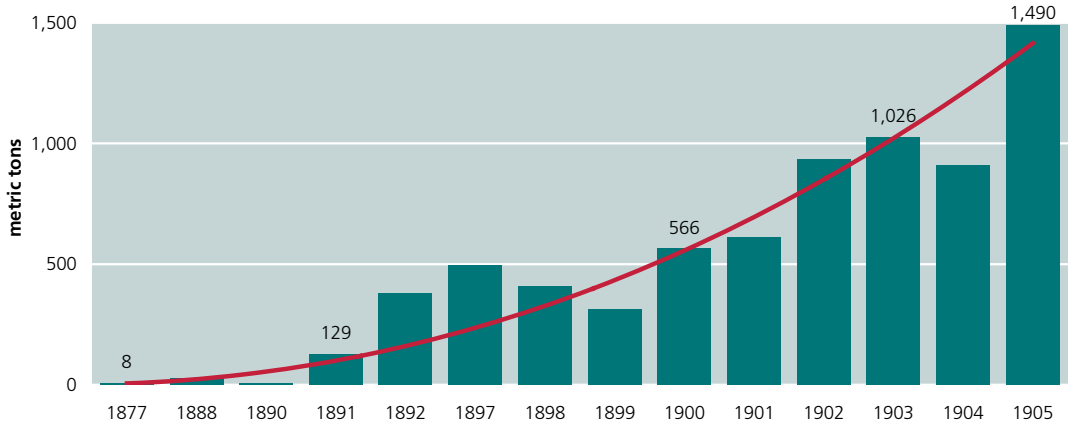
Source: International Opium Commission, Shanghai 1909, Annex 1. Statistics of Trade in Opium.

Fig. 18: Opium sales in Burma (Myanmar), 1904-1911



Sources: International Opium Commission, Shanghai 1909, Vol II, p. 187 and Conférence Internationale de l'Opium, La Haye, 1 décembre 1911 – 23 janvier 1912, Tome II, p. 93.

Fig. 19: Coca leaf exports from Peru, 1877-1905



Source: David. F. Musto, "International Traffic in Coca Through the Early 20th-century," *Drug and Alcohol Dependence*, 49, 1998, Table 6, p. 153.

2.2.2 The Hague Convention, 1912

The recommendations of the Shanghai conference did not constitute an internationally legally binding international instrument. It was again the bishop of the Philippines, the Right Reverend Charles H. Brent, who lobbied for a follow-up conference, and argued that this time, the delegates should be allowed to commit on behalf of their governments. After having gained US support, he worked with anti-opium groups in Britain and beyond to secure the agreement of the other nations. The formal initiative came from the US State Department, and the government of the Netherlands agreed to host the conference and act as a secretariat. The conference took place in The Hague from 1 December to 23 January 1912 with the participation of representatives from China, France, Germany, Italy, Japan, the Netherlands, Persia, Portugal, Russia, Siam (Thailand), the UK and the British oversees territories (including British India), and the USA. Bishop Brent was again elected president.

Following intensive discussions, the conference agreed on the world's first international drug control treaty. The first International Opium Convention consisted of six chapters and a total of 25 articles. In addition to opium and morphine, which were already under extensive discussion at the Shanghai Conference, the Convention of The Hague also included two new substances that had become problematic: cocaine and heroin.

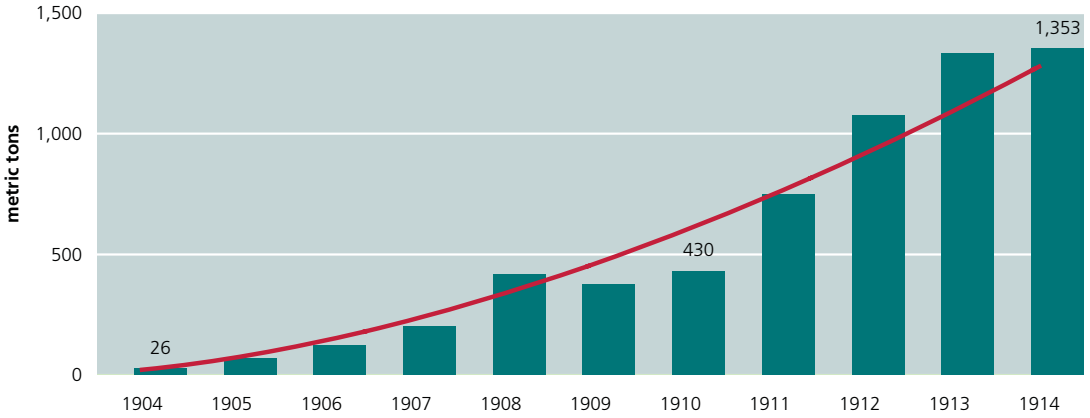
Cocaine was first synthesised by the German chemist, Albert Niemann in 1860, and rapidly gained popularity in both medical and recreational use in the late 19th century. Coca leaf exports from Peru tripled between 1900 (566 mt) and 1905 (1490 mt), before declining again due to regulation in the US market. This decline was offset by new cultivation in Java, where exports grew from 26 mt in 1904 to 1,353 mt in 1914.

Coca exports from Peru were primarily destined for the USA and Europe, mainly Germany. Exports to the USA doubled in the 1890s, reaching a peak at around 1,300 mt in 1906. In addition to domestic manufacture, the USA also imported large quantities of cocaine from abroad, thus emerging as the world's largest cocaine market[86] a position which the country maintains into the 21st century. The situation was sufficiently serious for a number of individual U.S. states to issue their own laws to curb the abuse of cocaine towards the turn of the century.

The growing recognition of the problematic nature of cocaine, amplified by the international discourse on the topic, led to a long term decline in its licit production over the next century. Global legal cocaine manufacture in 1903 amounted to 15 mt (of which two thirds, or around nine mt were consumed in the USA).[87] The legal manufacture of cocaine was 0.3 mt by 2006,[88] of this one third, or 0.1 of a ton, is legally consumed in the USA. Awareness among medical doctors of the risks involved in cocaine use – which came about largely through the early international drug control system – and the subsequent development of alternative medicines which have less serious side effects, led to this decline. Most of the progress in reducing global cocaine production was already achieved in the first half of the 20th century.

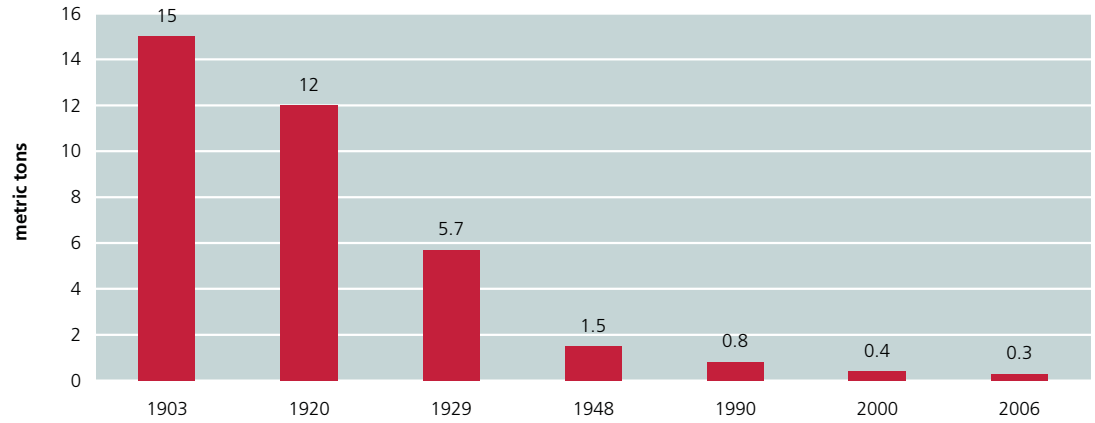
Heroin was a relatively new addition to the drug control problem at the time of the Hague Convention, as it had only become available as a pharmaceutical preparation in 1898. Ironically, it was originally marketed as a non-addictive alternative to morphine, which was already proving problematic in many areas. Recognising that the

Fig. 20: Coca leaf exports from Java (Indonesia), 1904-1914



Source: David. F. Musto, "International Traffic in Coca through the Early 20th- century," *Drug and Alcohol Dependence*, 49, 1998, Table 6, p. 153.

Fig. 21: Legal cocaine production, 1903-2006



Sources: Paul Gootenberg, "Cocaine in Chains: The Rise and Demise of a Global Commodity, 1860-1950", in Steven Topik, Carlos Marichal & Zephyr Frank, *From Silver to Cocaine*, Durham and London 2007, pp. 321-351, United Nations, "Legal Trade in Narcotics 1949", *Bulletin on Narcotics*, 1951, Issue 2, United Nations, "Legal Trade in Narcotics 1950", *Bulletin on Narcotics*, 1952, Issue 2, United Nations, "Legal Trade in Narcotics 1952", International Narcotics Control Board, *2007 Narcotic Drugs*, New York 2008, p. 99 and p. 212.

global narcotics problem now included these drugs, the signatories to the International Opium Convention bound themselves to work towards a progressive suppression of the abuse of opium, morphine and cocaine and the establishment of a mutual understanding for this endeavour.[89]

Chapter I of the International Opium Convention deals with raw opium. In Article 1, all contracting Powers committed themselves to enact effective laws and regulations to control the production and distribution of raw opium. In Article 2, the participating countries agreed to limit the number of towns, ports and other locations involved in the opium trade. In Article 3, countries agreed to prevent the export of raw opium to countries that prohibit its import. This was in one of the key achievements of the Convention. In Article 4, countries committed themselves to mark every package containing raw opium for export that exceeded five kilograms.

Chapter II deals with prepared opium. In Article 6, the contracting Powers agreed to gradually eliminate the manufacture, domestic trade and use of prepared opium. Article 7 declared that the import and export of prepared opium was to be prohibited 'as soon as possible'. Under Article 8, countries agreed to prohibit the export of prepared opium to countries that prohibited its import. All remaining exports had to be properly marked, indicating the content of the package, and exports were restricted to specially authorised persons.

Chapter III dealt with medicinal opium, morphine, heroin and cocaine. Article 9 called on the contracting Powers to enact pharmaceutical laws or regulations to confine the use of morphine, and cocaine to medical use only and asked for mutual co-operation to prevent the use of these drugs for any other purposes. Article 10 called on the contracting parties to control all persons manufacturing, importing, selling, distributing and exporting morphine, and cocaine, as well as the buildings in which such industry or trade was carried out. In addition, only specially licensed establishments and persons would be permitted to manufacture morphine and cocaine. Records of the quantities manufactured, as well as imports, sales, exports and all other distribution of these substances, were to be kept. Article 11 specified that any sale to unauthorized persons must be prohibited. Article 12 stipulated that only specially authorised persons were allowed to deal in these substances. Article 13 laid down that exports were only allowed to licensed persons in the receiving country. Article 14 stipulated that these rules and regulations regarding the manufacture, import, sale and export had to be applied to (a) medicinal opium, (b) to preparations containing more than 0.2% morphine or more than 0.1% of cocaine, (c) to heroin or preparations containing more than 0.1% of heroin and d) to all new derivatives of morphine, cocaine, or of their respective salts, as well as to every other alkaloid of opium which may be liable to similar abuse and ill-effects.

Chapter IV dealt mainly with the drug problem of China. Article 15 called on the parties to take all necessary measures to prevent the smuggling of opium (raw and prepared), morphine, heroin and cocaine into China or into the Far-Eastern colonies and leased territories of China occupied by foreign powers. The Chinese Government, on their part, was to take similar measures for the suppression of the smuggling from China to the foreign colonies and leased territories. In Article 17, the parties committed themselves to adopt necessary measures to restrict and control the habit of smoking opium in any holdings in China and, in Article 18, to gradually reduce the number of shops selling raw and prepared opium.

Chapter V had only two articles. In Article 20, the contracting Powers were asked to make the illegal possession of opium, morphine, cocaine and their respective salts a penal offence. Article 22 made it an obligation for the contracting Powers to communicate to each other, through the Ministry of Foreign Affairs of the Netherlands, (a) the texts of existing laws and administrative regulations with regards to narcotics and (b) to provide statistical information regarding the trade in raw and prepared opium, morphine, heroin and cocaine.

Chapter VI dealt with the final provisions of the treaty and the signing and ratification procedures. In Article 22, all countries were invited to sign the convention, including those not present at the creation of the convention. A number of the latter were specifically mentioned, such as Turkey, Serbia, Switzerland, Bolivia, Peru, and Colombia. Article 23 stipulated that all the Powers had to sign the convention before it could be ratified. According to Article 24, the convention would enter into force three months after all the ratifications would have been received. In the event of not having received all signatures by the end of 1912, the Government of the Netherlands was instructed (Article 23) to invite the Powers who had signed the convention to deposit their ratifications. The treaty was, however, not clear what the legal consequences of an only partial ratification would be.

The 1912 convention was far from perfect, but it contained many of the elements of a comprehensive drug control treaty. It also had value as an advocacy tool, as an official declaration on the dangerous practices of opium smoking and the non-medical trade in opium and other drugs.[90] It also provided the impetus for national legislation on the topic, such as the 1913 Harrison Act in the United States, the foundation of U.S. drug law in the 20th century.[91] The lack of U.S. legislation at the time of the Hague conference significantly undermined the ability of the U.S. to press its case. Perhaps partly as a result, the U.S. delegation did not succeed in securing an agreement over a reduction in opium poppy cultivation. Thus, Article 1 only obliged the contracting powers to 'control' opium production, not to limit it to medical and scientific use. However, exports, imports and local distribution were expected to fall as a consequence of the implementation of the convention, and they did. States also agreed to gradually suppress opium smoking, but they did not agree on any timetable, and this allowed most states to maintain the status quo over the next decade.

A controversial proposal, put forward by the U.S. delegation, was to implement a system of reciprocal notification concerning opium imports and exports and the granting of reciprocal rights to search vessels suspected of carrying contraband opium. These two US proposals, however, did not meet with the approval of the other countries. Italy, affected by the cannabis and hashish trade in its African possessions, proposed measures to reduce the trade in cannabis herb and resin, but this proposal did not find sufficient support at The Hague conference, which merely recommended that the issue be investigated. Significant gains were made by China, the subject of a whole chapter of the convention, but this progress was largely nullified by the subsequent collapse of the empire.[92]

Chapter III, dealing with the manufacture of drugs, proved to be the most controversial one in the negotiations. In particular, the German empire objected to curtailing its manufacture and exports of psychoactive drugs. In the negotiations, the German delegation succeeded in having codeine removed from the list of substances under control. Germany also argued that until states not represented at the conference[g] adhered to the treaty's provisions, the drug business would simply migrate to the countries featuring the least restrictive regulatory regime. Thus, the German delegation, supported by France and Portugal, insisted that all thirty-four governments would have to ratify the treaty before it entered into force. The argument was logical, as anything short of complete international cooperation could jeopardize global control efforts. In the short run, however, such a ratification process made it almost impossible for the treaty to be enacted.[93]

The outbreak of World War I prevented the implementation of the first international drug control treaty at the global level. The United States, China and the Netherlands (as the secretariat of the treaty), in addition to Norway and Honduras, however, adopted the Opium Convention among themselves. While this had little practical effect, it at least prevented the burial of the First International Opium Convention.

World War I led to rapidly rising levels of drug use in several countries. Many of the countries that had been reluctant to implement the International Opium Convention changed their attitude in light of growing domestic substance abuse problems. Great Britain, for instance, used the *Defense of the Realm Act* to tighten domestic controls, focusing on punitive measures for cocaine and opium offences. Germany, Canada and other states instituted similar acts to restrict access to drugs and to deter smuggling while conserving vital medicinal resources (such as morphine), which were of particular importance during wartime. Many of these ad-hoc wartime administrative arrangements were made permanent after 1918.[94] Most countries were aware of the consequences of a large-scale, nation-wide morphine epidemic, a problem first manifest among veterans of the US civil war half a century earlier.[95] Wartime smuggling also demonstrated that laxity in one jurisdiction could easily imperil the efficacy of the legislation elsewhere. Thus, the UK Home Office introduced a system of import/export authorizations designed to ensure that all drug shipments into and out of Britain had a legitimate destination. This system was then increasingly adopted by other countries and would eventually emerge as the nucleus for successful legal drug control at the international level.[96]

The situation was different in China. Major progress in reducing opium poppy cultivation and in curbing opium smoking had occurred in China over the 1906-1911 period.[97] The 1911 revolution disrupted the anti-opium campaign, and many of the prohibitions on opium smoking, retailing and trafficking were no longer enforced. In 1915, the leader of the new Republic, Yuan Shikai, went a step further and approved again government-managed opium monopolies in several provinces (Guandong, Jiangxi and Jiangsu), effectively legalizing opium again. After his death in 1916, opium revenue became a major financial resource for many warlords, mainly through so-called 'fines' (i.e. taxes) on cultivation, trade, and consumption. Ironically, the policy of 'suppression through fines' made opium use more common in many parts of the country, especially in the south-west and north-west.[98]

Despite this setback, the international drug control

g The most important of these were Peru and Bolivia for coca production; Turkey, Serbia and other Balkan countries for opium production; and Switzerland for its pharmaceutical industry.

movement continued. The US, the British and the Chinese authorities, apparently independent from each other, came up with a similar idea for broadening the accession base of the Opium Convention: to build it into the peace treaties. Article 295 of the peace *Treaty of Versailles* (28 June, 1919) stipulated:

"Those of the High Contracting Parties who have not yet signed, or who have signed but not yet ratified, the Opium Convention signed at The Hague on January 23, 1912, agree to bring the said Convention into force, and for this purpose to enact the necessary legislation without delay and in any case within a period of twelve months from the coming into force of the present Treaty.

Furthermore, they agree that ratification of the present Treaty should in the case of Powers which have not yet ratified the Opium Convention be deemed in all respects equivalent to the ratification of that Convention and to the signature of the Special Protocol which was opened at The Hague in accordance with the resolutions adopted by the Third Opium Conference in 1914 for bringing the said Convention into force.

For this purpose the Government of the French Republic will communicate to the Government of the Netherlands a certified copy of the protocol of the deposit of ratifications of the present Treaty, and will invite the Government of the Netherlands to accept and deposit the said certified copy as if it were a deposit of ratifications of the Opium Convention and a signature of the Additional Protocol of 1914.[99]

An almost identical text is found in Article 247 of the *Treaty of Peace between the Allied and Associated Powers and Austria* (St. Germain-en-Laye, 10 September 1919) which entered into force in 1920.[100] Similar text is also found in Article 230 of the *Trianon Treaty* with Hungary, in Article 174 of the *Neuilly Treaty* with Bulgaria, in Article 280 of the *Sévres Treaty* with Turkey, and in Article 100 of the *Lausanne Treaty* (1923), which superseded the *Sévres Treaty*. Thus, virtually at the stroke of a pen, the first International Opium Convention gained a near-universal adherence after 1919. More than 60 countries and territories ratified the Hague treaty and by 1949 the number had risen to 67.[101] All key opium/morphine and coca/cocaine producing, exporting and importing countries were signatories and most countries ratified the peace treaties, and thus the International Opium Convention, between 1919 and 1921.[102]

2.3 Drug control under the League of Nations, 1920-1945

The peace treaties of 1919 also laid the foundation of the League of Nations, the predecessor of the United Nations. With the creation of the League of Nations in 1920, it became obvious that an international convention, such as the Opium Convention, should not be overseen by an individual country (in this case, the Netherlands), but by the newly founded international organisation, which had 42 founding members.

Thus, by a resolution of the League of Nations of 15 December 1920, the newly founded "*Advisory Committee on the Traffic in Opium and Other Dangerous Drugs*", usually referred to as the "*Opium Advisory Committee*" (OAC) was authorized to take over the functions laid down in the Hague Opium Convention of 1912.[103] Composed of governmental representatives the OAC initially met quarterly during its early years, and later annually and can be thus seen as the forerunner of today's *Commission on Narcotic Drugs* (CND). In addition, the League created an "*Opium and Social Questions Section*" (often referred to as the '*Opium Section*') within its secretariat for administrative and executive support. The League Health Committee (forerunner of the World Health Organization) took responsibility for advising on medical matters.

The new international drug control organs focused considerable initial efforts on gauging the extent of the problem. The OAC requested information about imports, exports, re-exports, consumption, reserve stocks, etc. The staggering size of the world drug problem soon became apparent. Conservative estimates suggested that world production of opium and coca exceeded 'legitimate' need (for medical and scientific purposes) by at least a factor of ten, clearly indicating the world had a long way to go to achieve a reasonable equilibrium. In addition, a substantial percentage of manufactured drugs were still sold for non-medicinal purposes in many countries. Against this background, the OAC urged states to adopt an import/export certification scheme modelled after the British system introduced during World War I.[104]

One specific problem in the initial years of international drug control was the fact that several key players –in particular the United States – did not join the League of Nations. Thus, a number of rather complex institutional solutions had to be found (some of which are still in existence) to mitigate the consequences and enable at least some collaboration in the international drug control area.

Not being in the League, the USA could not lead international drug control efforts, as it did for the Shanghai Conference or the conference leading to The Hague Convention. This role was now increasingly taken over by the United Kingdom, which emerged in the inter-war period as the lead nation promoting international drug control efforts.

2.3.1 The 1925 Convention

Renewed efforts to strengthen international cooperation and international drug control were made in 1924/25. Back-to-back conferences were held and two separate

treaties were concluded. The first concluded with an *Agreement Concerning the Manufacture of, Internal Trade in, and Use of Prepared Opium,* which was signed on 11 February 1925 and entered into force on 28 July 1926.[105] It focused on opium-producing nations and stated that the signatory nations were, "*fully determined to bring about the gradual and effective suppression of the manufacture of, internal trade in and use of prepared opium*".

Article I required that, with the exception of retail sale, the importation, sale and distribution of opium be a government monopoly, which would have the exclusive right to import, sell, or distribute opium. Leasing, according, or delegating this right was specifically prohibited. Article II prohibited sale of opium to minors, and Article III prohibited minors from entering smoking divans. Article IV required governments to limit the number of opium retail shops and smoking divans as much as possible. Articles V and VI regulated the export and transport of opium and dross. Article VII required governments to discourage the use of opium through instruction in schools, literature, and other methods.[106]

This treaty was signed and ratified by seven major powers: Britain, India, France, Japan, The Netherlands (including the Netherlands Indies, Surinam and Curaçao), Portugal and Thailand.[107]

A Second Opium Conference in 1924/25 adopted a new *International Opium Convention* (Geneva, 19 February 1925), mainly detailing the 1912 The Hague Convention.[108] Three years later, it entered into force (1928) and was eventually signed and ratified by 56 countries.[109] This included many of the key players in the drugs trade, both League of Nations members and non-members, including the British Empire, India, the Netherlands, France, Japan, the Soviet Union, Germany, Switzerland, Turkey, Portugal, Egypt, and Bolivia. However, the Convention was not signed and ratified among other key players such as the United States of America, China, Persia (signed but not ratified) and Peru.[110] The main achievements of this Convention were to detail the content of the Hague Convention, to institutionalize the international control system and to extend the scope of control to cannabis.

The British import/export authorisation model was formally adopted as the way forward to control the international trade (Chapter V). This system is still in place today. The system of import certificates and export authorizations is to assure that every international transaction in narcotic substances is controlled from both ends by the competent authorities of the importing country as well as those of the exporting country.[111] The 1925 Convention also provided details on the statistical reporting requirements under the Hague Convention, spelling out the exact figures signatories were obliged to supply.

Chapter II of the Convention dealt with internal control of raw opium and coca leaf. While states agreed to 'control' production, the Convention still fell short of requiring them to 'limit' production to medical and scientific needs. Thus the president of the conference, Sir Malcolm Delevingne (UK) concluded: "*The American principle for a limitation of production to medical and scientific purposes, though accepted as a principle both by the Advisory Committee on the Traffic in Opium and the Assembly, has not been included in the Convention as a contractual obligation."*[112]

Due to the inability of the delegates to come to an agreement on reductions in opium production, the US delegation, followed by the Chinese delegation, withdrew from the conference and did not sign and ratify the 1925 Convention.

In contrast, in Chapter III, dealing with the internal control of manufactured drugs, as opposed to cultivation of plant based drugs, the drafters were able to go a step further. Article 5 declares: "*The Contracting Parties shall enact effective law or regulation to limit exclusively to medical and scientific purposes the manufacture, import, sale, distribution, export and use of the substances to which this Chapter applies….".*

The 1925 Convention also established the Permanent Central Board (Chapter VI, Art. 19-27), the forerunner of the International Narcotics Control Board (INCB). The Permanent Central Board was set up as an impartial body whose members should not be Government representatives but should serve in a personal capacity, not holding any offices which would put them in a position of direct dependence on their Governments.[113] The main task of the Permanent Central Board, sometimes also referred to as Permanent Central Opium Board (PCOB), was to administer the statistical information sent by States Members to Geneva and, according to Article 24, to "watch the course of the international trade. If the information at its disposal leads the Board to conclude that excessive quantities of any substance covered by the present Convention are accumulating in any country, or that there is a danger of that country becoming a centre for the illicit traffic, the Board shall have the right to ask, through the Secretary-General of the League, for explanations from the country in question." The Board also established the system of import certificates and export authorizations for the licit international trade in narcotic drugs.[114]

The drafters of the convention may have chosen to create a new regulatory body – the Board – rather than

use the existing Opium Section of the League of Nations in order to include non-members, such as the United States and Germany, in the process.[115] Another difficult issue was the degree to which the Board could or should control the production, manufacture of and trade in drugs. The original proposal of mid-1924 envisioned a Board with wide ranging powers, including the authority, after receiving estimates from governments, to authorise the amount of drugs to be manufactured each year. Imports and exports would then have been limited to the quantities specified in the estimates. The Board would have had the power to fix estimates for countries that failed to submit their own estimates, and question estimates that seemed excessive.[116]

In the final version of the Convention, the Board did not have the right to question the statistics submitted by governments. The Board could request an explanation only when there was deemed to be sufficient evidence that a country acted as a centre for the illicit traffic of drugs (Article 24, §1), and then it could do so only through the Secretary-General of the League of Nations. The Board had no power to levy sanctions against a state it declared to be a centre of illicit traffic; it could only bring the issue to the attention of the governments of the Contracting Parties and the Council of the League of Nations.[117]

Even with reduced powers, the installation of the Central Permanent Board proved to be useful in reducing the drug trade, especially as the cost of failing to adhere to international rules rose over the years. Most countries did not want to run the risk of being singled out by the Board. By 1925, the Government of British India concluded that the political costs linked to continued opium exportation outweighed the economic advantages and revised its policy. It announced that it would end opium exports to any state or colony acting as a centre for the illicit traffic (such as Macao at the time), even if such a government were to produce any valid import certification. In 1926, the Government of British India declared a gradual reduction of all non-medicinal opium exports. Indian exports dropped significantly in subsequent years.[118]

Another new element of the 1925 Convention was the application of the international drug control system to cannabis. This followed a passionate speech by the head of the delegation from Egypt. As a consequence, the 1925 Convention had a separate chapter on Indian Hemp (Chapter IV). Article 11 §1 stated:

"*In addition to the provisions of Chapter V [Control of International Trade] which shall apply to Indian hemp and the resin prepared from it, the Contracting Parties undertake: (a) To prohibit the export of the resin obtained from Indian hemp and the ordinary preparations of which the resin forms the base… to countries which have prohibited their use, and in cases where export is permitted, to require the production of a special import certificate issued by the Government of the importing country stating that the importation is approved for the purposes specified in the certificate and that the resin or preparations will not be re-exported …* " Article 11 §2 laid down the general rule: "*The Contacting Parties shall exercise an effective control of such a nature as to prevent the illicit international traffic in Indian hemp and especially in the resin.*"

The Convention only dealt with the international dimension of the cannabis trade. It did not prohibit the production of cannabis; it did not request signatories to control domestic traffic in cannabis; it did not prescribe measures to reduce domestic consumption; and it did not ask governments to provide cannabis production estimates to the Board.[119] Therefore, control of cannabis was far less comprehensive than control of opium/morphine/heroin or coca/cocaine.

2.3.2 The 1931 Convention

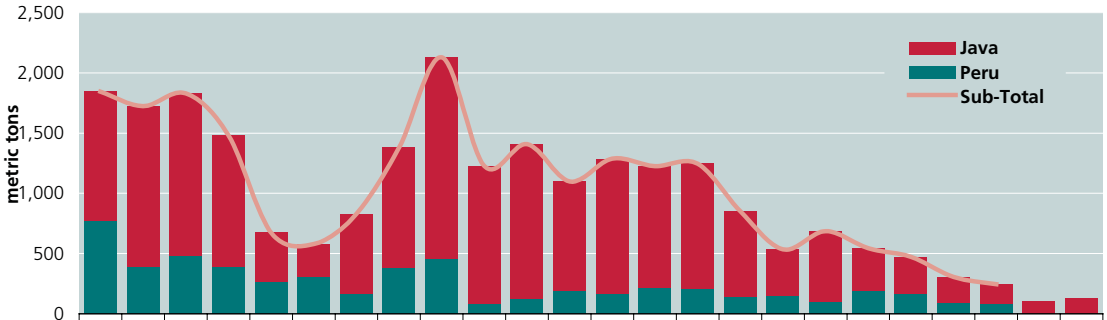
By the end of the 1920s, drug control efforts had achieved several objectives. The 1925 International Opium Convention enjoyed growing acceptance, and even countries which had not signed and ratified it, such as the USA, cooperated to a large degree with the international bodies of the League of Nations, including the Permanent Central Opium Board. Government statistical returns were increasingly received and provided a clearer picture of the supply and demand situation. Many states had strengthened their domestic enforcement efforts. There were signs that the controls in the USA started to show positive results. India, the world's main opium exporter, started to reduce its opium exports.

The strong decline of the licit coca sector in the inter-war period is reflected in coca leaf export data from Java and Peru, the two main coca leaf exporting areas. These exports declined by 88% between 1920 (2,130 mt) and 1933 (247 mt).

Despite progress, the opium problem was not solved.[120] Persia and other states started to fill the void created by the Indian withdrawal from the quasi-medicinal market. In addition, there was still the problem of continuing overproduction of opium inside China. Statistical returns also indicated that imports of manufactured drugs into China had started to skyrocket. As European governments pressured pharmaceutical companies to conform to more stringent control standards, a number of operators moved their activities to other states that had not ratified the International Opium Convention.

Rather than attempting to limit agricultural production of narcotic substances, attention shifted to strengthening the control regime at the manufacturing level, i.e. to limit the manufacture of drugs to medical and scientific

Fig. 22: Licit coca leaf exports of the two main coca leaf exporting countries in the early 20th century



	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Java	1,075	1,332	1,353	1,089	408	272	662	994	1,677	1,137	1,284	907	1,118	1,008	1,043	709	385	585	354	304	209	161	105	125
Peru	770	393	478	393	266	307	167	386	453	88	124	190	170	217	204	143	150	101	192	170	97	86		
Sub-Total	1,845	1,725	1,831	1,482	674	578	829	1,380	2,130	1,225	1,408	1,097	1,288	1,225	1,247	852	535	686	546	474	306	247		

Source: David F. Musto, "International Traffic in Coca through the Early Twentieth century", in *Drug and Alcohol Dependence*, Vol. 59, 1998, Table 5 and Table 6.

needs. Fifty-seven nations attended the *Conference on the Limitation of the Manufacture of Narcotic Drugs*, which met in Geneva from 27 May to 13 July 1931. Governments managed to agree on indirect limitations, while maintaining a high degree of free trade and competition.

The *Convention for Limiting the Manufacture and Regulating the Distribution of Narcotic Drugs*[121], was established and signed on 13 July 1931 and entered into force in July 1933, once the requisite 40 states had ratified it.[122] Eventually 67 countries[123] signed and ratified this convention, including all key drug manufacturers: the United States, Germany, Switzerland, the Netherlands, Great Britain and Northern Ireland, France, Canada, Australia and the Soviet Union.[124] In fact, the 1931 Convention was the only League of Nations drug convention ever signed and ratified by the United States.

The 1931 Convention introduced a compulsory estimates system aimed at limiting the world manufacture of drugs to the amounts needed for medical and scientific purposes and established a *Drug Supervisory Body* to monitor the operations of the system.[125] The Convention was intended to "*..supplement the Hague Convention of 1912 and the Geneva Convention of 1925…*".

Under the new control system, signatories were to submit estimates on the quantities needed for medical and scientific needs. States could revise the estimates in case of medical emergency. In order not to limit free trade, signatories did not have to designate in advance where they would buy their supplies. This allowed them to shop for the lowest price. The treaty also required countries to cease manufacture or imports when they exceeded their annual estimate.

The Convention obliged countries to carefully monitor all manufacturing activities. Responsibility for monitoring the estimate system was given to a newly founded *Drug Supervisory Body*[126] (abbreviated DSB or the Body). The Body was in charge of a comprehensive assessment of global drug requirements, including assessing the needs of countries not party to the treaty. States were obliged to report imports and exports of drugs to the Body after execution of the orders.[127]

The 1931 Convention also introduced what is known today as 'drug scheduling', applying different control measures for different drugs. Under the 1931 Convention, the degree of limitation and regulation varied according to two criteria: the first was the degree of danger presented by a particular drug, and the second was the extent to which a drug was used by the medical profession. From these points of view, the drugs covered by the Convention fell into three groups.[128] Drugs such as codeine and dionine, were subjected to the least stringent measures due to their medical utility and lower abuse potential. Heroin, in contrast, was banned for export, except under special conditions. Under the Convention, any heroin seized should either be destroyed or converted, rather than diverted to medical or scientific use, as was permitted for seizures of some other drugs.

2.3.3 The 1936 Convention

The Hague Convention of 1912, the International Opium Convention of 1925, and the 1931 Convention for Limiting the Manufacture and Regulating the Distribution of Narcotic Drugs provided a basis for controlling the licit trade in psychoactive substances. The Permanent Central Opium Board concluded that by 1934-35, legal manufacture of opiates and cocaine had dropped to approximately the level of legitimate demand.[129] However, progress made on the licit side

prompted the emergence of rising illegal activities and the increased involvement of international organised crime syndicates.[130]

To specifically address illicit drug activities, the League of Nations convened a conference in 1936 that drafted the *1936 Convention for the Suppression of the Illicit Traffic in Dangerous Drugs*, signed on 22 July 1936.[131] This was the first treaty to focus explicitly on drug trafficking and the first to make certain drug offenses international crimes.

In Article 2 the Convention stated:

"*Each of the High Contracting Parties agrees to make the necessary legislative provisions for severely punishing, particularly by imprisonment or other penalties of deprivation of liberty, the following acts – namely :*

(a) The manufacture, conversion, extraction, preparation, possession, offering, offering for sale, distribution, purchase, sale, delivery on any terms whatsoever, brokage, despatch, despatch in transit, transport, importation and exportation of narcotic drugs, contrary to the provisions of the said Conventions;

(b) Intentional participation in the offences specified in this Article;

(c) Conspiracy to commit any of the above-mentioned offences;

(d) Attempts and, subject to the conditions prescribed by national law, preparatory acts.

Also for the first time the Convention dealt explicitly with the issues of drug related crime committed abroad and the related questions of extradition.

Once again, however, the practical importance of this Convention remained limited because a number of key countries did not sign and ratify it. Among these was the USA, for which the convention was not sufficiently far-reaching and still did not render punishable all non-medical cultivation, production and distribution of drugs.[132] In addition, by this time, countries such as Germany and Japan were no longer participating in international conferences of this sort. In total, only 13 countries signed and ratified the 1936 Convention.[h] Moreover, it only became effective in October 1939, after World War II had started, and drug control was certainly not top priority for most countries during this time.[133] It was not until five decades later that these topics were dealt with at the international level, within the framework of the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.

h Belgium, Brazil, Canada, China, Colombia, Egypt, France, Greece, Guatemala, Haiti, India, Romania and Turkey.

2.3.4 International drug control in the final years of the League of Nations

Increasing political tensions in the late 1930s clearly weakened international cooperation. Germany, which had entered the League of Nations in 1926, left the organisation in 1933, after the National Socialists took power in that country. Japan left the League of Nations in 1933 after the League had voiced opposition to its invasion of the Chinese territory of Manchuria. Italy withdrew in 1937, when the League condemned its invasion of Ethiopia. The Soviet Union, which had only joined the League of Nations in 1934, left in 1939, after discord arising out of its aggression against Finland.[134] But despite the unfavourable political environment, international drug control continued to work rather satisfactorily until the outbreak of World War II. Most countries adhered to the conventions and even supplied statistics until 1939, some even during World War II.[135] Many of the offices of the international drug control system were, as of 1940, gradually transferred to the United States, though the official seat (and some staff) remained in Geneva. The Opium Advisory Committee was moved to Princeton and the Central Permanent Board and the Drug Supervisory Body to Washington.

2.4. Development of the present system under the United Nations

As of 1946, the United Nations assumed the drug control functions and responsibilities formerly carried out by the League of Nations. The functions of the League's *Opium Advisory Committee* were transferred to the United Nations *Commission on Narcotic Drugs* (CND). The functions of the Opium Section were taken over by a new *Division on Narcotic Drugs* (DND), which was headquartered in New York until 1955, when it was moved to Geneva. Similarly, the annual Commission on Narcotic Drugs meetings were held in New York until the mid-1950s and subsequently held in Geneva.[136] The decision to initially centre many of the key activities away from their traditional home in Geneva may have been based upon a desire to reinvigorate the drug control effort.[137]

In this context the technical and research expertise of the new United Nations Division on Narcotic Drugs was strengthened in a number of areas, changing the very character of the new drug control secretariat. One of the most innovative and ambitious programs at the time was the establishment of the United Nations programme for determining the origin of opium by chemical and physical means in 1949. In ECOSOC Resolution 548 (XVIII) D of July 1954, the Economic and Social Council decided (§14) to set up a United Nations narcotics laboratory[138] which was subsequently established in Geneva before being moved together with the other international drug control bodies to the new headquar-

ters in Vienna in 1979. The UN laboratory later also provided training and other forms of assistance to forensic laboratories in developing countries in order to enable them to identify drugs with modern analytical methods and assist law enforcement and the judicial system.[139] In addition, the DND developed technical expertise in a number of other areas, notably in law enforcement (setting up the regular Head of Law Enforcement Agency (HONLEA) meetings); demand reduction; and legal services, assisting governments to implement the international drug convention. One of the key tasks remained serving the Commission on Narcotic Drugs (CND) as its secretariat.

In order to improve the overall assistance to developing countries, an additional body was created in 1972, the *United Nations Fund for Drug Abuse Control (UNFDAC).* Its main task was to raise funds to implement various technical assistance activities, notably providing assistance to developing countries in order to help farmers stop cultivating illegal drug crops; such activities are now grouped together under the generic category of "alternative development" or "alternative livelihoods".

The Permanent Central Board (PCOB) and the Drug Supervisory Body (DSB), created by the League of Nations Conventions, were authorized to continue performing their functions under the aegis of the United Nations after World War II.[140] The standing bodies charged with international drug control would undergo many transformations in the coming decades.[i]

2.4.1 The 1946, 1948, and 1953 Opium Protocols

One of the first acts of the United Nations was the *1946 Protocol* which legally transferred all the drug control functions from the League of Nations to the United Nations. It entered into force on 10 October 1947. The previous drug control conventions and treaties remained in force and in the 1946 Protocol the international community restated its intention to maintain control over addictive drugs.[141]

Around the time of World War II, new pain-killing medications were developed for treating battlefield casualties, the most important of which was methadone, developed by German scientists in 1937. Another important substance was pethidine, then known as Demerol. Both substances were produced and marketed by German companies during the war. In 1948, the CND drafted a separate agreement ('protocol') that required states to submit the new substances to the same estimates-of-need and statistical reporting provisions that applied to existing opium-based narcotics. The DSB and PCOB could then oversee the synthetic narcotics trade in the established manner. The *1948 Synthetic Narcotics Protocol* quickly gained wide acceptance, coming into force only a year later. In fact, this Protocol appears to have been a good illustration of prompt action by the international community preventing a potential disaster that was already looming.[142] The application of the 1948 Protocol meant the placing 14 new substances under international control by 1951 and a further six by 1954.[143]

Following World War II, the political situation had changed. The United States and the Soviet Union emerged as the two new superpowers. Germany and Japan had lost the war. The European colonial powers were weakened and in the process of giving up their colonial empires. During the War, in 1943, the US administration issued a resolution to end all opium smoking in the areas liberated from Japan, which also included previous colonies and territories controlled by various European countries.[144] Further, the US undertook, as of the late 1940s, new initiatives to finally prohibit the production and use of opium for other than medical and scientific needs.[145] The original plan, launched in 1948 by the head of the US delegation, Harry Anslinger[j] was to have this principle incorporated into a new Single Convention. LNegotiations for the Single Convention (1961) would last for another thirteen years, because they were complicated by the emerging East-West conflict.

In the meantime, the final elimination of opium production and consumption in China, following the takeover of the country by the Communist Party in 1949, changed global opium markets forever. No longer could opium producing countries defer reductions on the pretext that any sacrifices made would simply be replaced by increases in Chinese domestic production. In a number of campaigns between 1949 and 1952, the government in China, counting on public support, effectively eliminated opium production, trade and consumption from China.[146]

During this period, a new attempt was made to solve the global opium problem. In June 1953, countries agreed

i In 1945, the PCOB and DSB staff and records were moved back to Geneva and continued their work there. Their secretariats, however, were merged, establishing the basis for the International Narcotics Control Board (INCB). The geographical distance between the Division on Narcotic Drugs (DND) in New York and the PCOB and DSB in Geneva created, however, some difficulties with regard to day to day cooperation. This prompted, a decade later (1955), the geographical re-unification of the three drug control bodies (PCOB, DSB and DND) at one central location (Geneva). In 1979, the international drug control bodies (DND, UNFDAC and INCB) moved to their new headquarters in Vienna. Yet another decade later (1991), the secretariats of the three drug control bodies (DND, UNFDAC and INCB) were merged into the United Nations International Drug Control Programme (UNDCP). The secretariats of the UNDCP and of the Centre for International Crime Prevention (CICP) were unified in 1997 to become the Office for Drug Control and Crime Prevention. In 2002, the office was renamed the United Nations Office on Drugs and Crime (UNODC).

j Head of the Federal Bureau of Narcotics (FBN) and a key player in domestic and international drug control as of the early 1930s.

to the elaboration of a *Protocol for Limiting and Regulating the Cultivation of the Poppy Plant, the Production of, International and Wholesale Trade in and Use of Opium,* generally known as the *1953 Opium Protocol.* This document was intended to finally adopt the longstanding US goal of limiting opium production and use to only medical and scientific needs. According to this Protocol, only seven countries – Bulgaria, Greece, India, Iran, Turkey, the USSR and Yugoslavia – would be authorized to produce opium for export.[147] The Protocol also required countries to implement comprehensive control systems at the national level.

The 1953 Opium Protocol contained the most stringent drug-control provisions yet embodied in international law.[148] The agreement extended to raw opium the reporting requirements placed on manufactured drugs under the 1931 Convention. Aimed primarily at producing states, signatories would submit to the DSB estimates concerning the amount of opium planted, harvested, consumed domestically, exported and stockpiled. Year-end statistics would be reported to the PCOB. The Protocol also gave the Board responsibility for making inquiries into discrepancies, conducting inspections, and imposing embargoes. The Board was also empowered to establish national production limits and could take investigatory and punitive action even concerning states that were not a party to the Protocol. Production would be limited, on a global level, to that needed for medical and scientific use. Signatories were, however, allowed a fifteen year grace period before the full powers of the Protocol were in force. In exchange for accepting the new burdens and limitations, producer countries received a monopoly on licit sales of opium. Parties to the treaty agreed to buy opium only from the seven states named in the text.[149]

The Protocol stipulated that twenty-five states, including three of the seven producing states, had to ratify in order to activate the treaty. In total, 61 countries signed and ratified the Protocol.[150] However, among the seven identified opium producing and exporting states only India and later Iran ratified the Protocol during the 1950s. This was not sufficient for the Protocol to enter into force. By the time the 1953 Protocol was ratified in July 1963, it was essentially superseded by the 1961 Single Convention, which entered into force in December 1964. Consequently, the 1953 Opium Protocol was only in force for about 1½ years.

2.4.2 The 1961 Single Convention

The number of international legal agreements on narcotic drugs, including the 1953 Protocol, had reached a total of nine, and not all had been signed and ratified by all the key countries. The complexity of this system created a need for unification and simplification.[151] Following 13 years of negotiation, the Single Convention was finally adopted in 1961 and entered into force on 13 December 1964, superseding all previous international conventions, protocols and treaties. This Convention is still regarded as a major achievement in the history of international efforts to control narcotics.[152] The time spent on these lengthy negotiations was worthwhile as it enabled the Single Convention to become a truly international instrument, supported by the overwhelming majority of all nations. Today, it is one of three treaties (together with the 1971 Convention on Psychotropic Substances and the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances) that define the international drug control system. As of March 2008, there were 183 parties to the Single Convention on Narcotic Drugs (as amended by the 1972 Protocol), representing 95% of the 192 UN States Members.[153] Far more countries acceded to it than to any previous drug control treaty.[154]

The Single Convention consists of 51 Articles, covering:

- definitions of the substances under control;
- the framework for the operations of the international drug control bodies;
- reporting obligations of States Members;
- obligations regarding the production, manufacture, trade and consumption of controlled substances;
- actions to be taken against illicit traffic and penal provisions.

The key provision of the Single Convention is to be found in Article 4: "*The parties shall take such legislative and administrative measures…to limit exclusively to medical and scientific purposes the production, manufacture, export, import distribution of, trade in, use and possession of drugs.*"[155]

The objectives of the Single Convention were three-fold: codification of existing multilateral treaty laws into one single document; streamlining of the international drug control machinery; and extension of the existing controls into new areas.

The first objective, to codify all existing multilateral treaty laws into one single treaty, was largely achieved. Provisions such as those on the estimates and statistics system established by the 1925 and the 1931 Conventions, were retained virtually without change. Similarly, the system of import and export authorizations remained intact, providing multiple avenues for discovering diversions from the licit trade. The same applied to the provisions for controlling the manufacture of narcotic drugs, established by the *1931 Convention*, which were continued while the new synthetic drugs, controlled under the 1948 Protocol, were included. The Single Convention

also retained the concept of schedules, first introduced in the *1931 Convention*, though expanding them from two to four. Some of the far-reaching inspection provisions contained in the *1953 Opium Protocol* (which, by 1961, had not yet entered into force) were, however, weakened in order to make the Single Convention more acceptable to several producer countries, most notably to the USSR and its allies. In addition, the Single Convention did not contain the closed list of seven recognized producers found in the 1953 Opium Protocol. This was again mainly due to interventions by the Soviet Union, which argued that other developing countries (notably Afghanistan) should be allowed to participate in this lucrative business.

The previous drug control conventions and treaties were superseded by the Single Convention. Only the poorly subscribed 1936 *Convention on the Illicit Traffic in Dangerous Drugs*, remained in force (except for Article 9 which was replaced by the new penal provisions contained in Article 36 of the Single Convention) because the delegations could not agree on which of its provisions to incorporate into the Single Convention.[156]

The second objective was to simplify and streamline the control machinery in order to strengthen the impact of international drug control efforts. This was done via the unification of the Permanent Central Board and the Drug Supervisory Body to become the International Narcotics Control Board (INCB). In addition, a number of administrative duties were consolidated and simplified. No consensus, however, was found on proposals to merge the Division of Narcotic Drugs with the secretariat of the INCB. Such a merger was only managed three decades later, with the creation of the United Nations International Drug Control Programme (UNDCP) in 1991.[157] While the main task of the Board was to monitor and control the licit production, manufacture, trade and consumption of narcotics, the Secretary-General [i.e. now UNODC, which is part of the UN's Secretariat] was to respond to the illicit trade.

The third objective of the Convention was the extension of the existing controls to include the cultivation of the plants grown as raw material for the production of natural narcotic drugs, as well as the prevention of non-medical drug consumption. Thus, the 1961 treaty continued to keep a tight rein on the production of opium and extended the international controls to the production of poppy straw (which increasingly served as the raw material of choice for the manufacture of morphine and other opiates) as well to the production of the coca-leaf and cannabis. These controls included the obligation to create national agencies for opium, coca, and, if applicable, for cannabis for countries deciding to maintain production of these crops for covering their medical and scientific needs. Such agencies were required to:

- designate the areas in which the cultivation could take place;
- allow only licensed cultivators to engage in such cultivation;
- take charge of importing, exporting, wholesale trading, and maintaining stocks.

Such provisions effectively barred private enterprises from participating in this lucrative line of business. At the same time, the Single Convention did not contain a general prohibition of drug production (as had been urged by some States Members, notably with regard to cannabis), but clear requirements that production, for whatever substance, could only take place under certain conditions and only for as long as there was a legitimate medical or scientific use for such drugs.

The Commentary to 1961 Convention pointed out that the term 'for medical purposes' was not uniformly interpreted by governments. Some flatly prohibited the consumption of narcotic drugs by addicts, while others permitted consumption by persons whose addiction proved to be incurable to prevent painful withdrawal symptoms. The Commentary also highlighted that the term 'for medical purposes' did not have the same meaning at all times and circumstances. Its interpretation depended, *inter alia,* on the stage of medical science. Not only 'western medicine' but also legitimate systems of indigenous medicine, such as those existing in China, India and Pakistan, had to be taken into account.[158]

The Single Convention prohibited, however, the non-medicinal, recreational practices of opium smoking, opium eating, coca-leaf chewing, as well as the smoking and other uses of cannabis resin and cannabis herb. At the same time, it enabled countries to opt for a transition period to abolish these practices. For instance, under the Convention, only persons officially registered as addicts by the competent authorities in 1964 were permitted to continue smoking opium. Countries also committed themselves to abolish the quasi-medical use of opium within a 15-year period (i.e. by 1979, as the Single Convention entered into force in 1964) and the practices of coca leaf chewing and the use of cannabis within a 25-year period (i.e. by 1989).[159]

The 'Penal Provisions' laid down in Article 36, §1 (a) state: *"Subject to its constitutional limitations each Party shall adopt such measures as will ensure that cultivation, production, manufacture, extraction, preparation, possession, offering.. distribution, purchase, sale, delivery… brokerage, dispatch, …transport, importation and exportation of drugs contrary to the provisions of the Convention… shall be punishable offences when committed intentionally, and that serious offences shall be liable to adequate punishment particularly by imprisonment or other penalties of deprivation of liberty."*

The use of drugs is not mentioned in Article 36. "Possession" is mentioned, but the Commentary makes it clear that this provision refers to "possession of drugs intended for distribution", not possession of drugs for personal consumption. While personal possession is dealt with under Article 33, this section provides states far more flexibility, requiring only that they "*use their best endevours to prevent this possession by all those administrative controls of production, manufacture, trade and distribution which are required by the Single Convention.*"[160] In other words, the Single Convention is tough on illegal production and trafficking, but it gives governments a high degree of flexibility in dealing with their local drug abuse problems, as long as they remain committed to the general obligation that "*legislative and administrative measures have to be taken to limit to medical and scientific purposes… the use and possession of drugs"* (Article 4, (c)).[161] While some national authorities have seen this as a weakness of the Single Convention, others have seen it as a strength, which enabled this Convention to survive for more than four decades and to gain almost universal acceptance.

The Single Convention obliged States Members to assist their drug addicts with medical treatment and rehabilitation.[162] The original wording of Article 38, §1 (prior to its amendment in 1972) was: "*The Parties shall give special attention to the provision of facilities for the medical treatment, care and rehabilitation of drug addicts".* This was an innovation, as the earlier international narcotics treaties had not contained such an obligation, even though it was already a long held view that victims of addiction needed to be assisted by treatment and rehabilitation.[163]

2.4.3 The 1972 Protocol amending the Single Convention

Given the rapid rise of drug use in the second half of the 1960s, new efforts were made to strengthen the international drug control system. In the USA alone, the number of arrests at the state level for marijuana possession rose ten-fold between 1965 and 1970, and a national survey in 1971 revealed that 24 million Americans used cannabis at some point in their lifetimes. The number of heroin addicts was estimated to have risen from about 50,000 in 1960 to roughly half a million by 1970.[164] In addition to ongoing diversions of opium from licit producers, illegal opiate production also increased strongly in South-East Asia, notably in Myanmar. Starting in the early 1970s, Myanmar became the world's largest supplier of illicit opiates for two decades. Much of the transformation of Myanmar's opium into heroin took place in neighbouring Thailand, although clandestine heroin laboratories also appeared in Myanmar and Laos.[165] The Vietnam War exposed US soldiers to heroin use, and life-time prevalence among US soldiers was estimated to have been as high as 25%.[166] In response, US president Richard Nixon declared 'war on drugs' in the early 1970s, with a particular focus on heroin.[167] This "war" was not only based on law enforcement, but also included special action by the White House on research, treatment and educational efforts. Against this background, the US proposed a new conference to agree on a number of additional drug control measures, which was convened in March 1972 in Geneva to amend the 1961 Single Convention, with a view to strengthen both supply and demand reduction efforts.[168]

By fine-tuning the existing Single Convention, the 1972 Protocol underscored the necessity to strengthen the current control system, increase efforts to prevent illicit production, strengthen the efforts to fight the illegal traffic in narcotics, prevent the use of drugs, and deal with the consequences of drug abuse. The Protocol consists of a total of 22 amendments to the Single Convention. All parties to the Single Convention also signed and ratified the Protocol, with three exceptions: Afghanistan, Chad and the Lao PDR.[169]

According to the amended Article 19, governments had to supply to the Board, in addition to existing reporting requirements, *inter alia*, information on, "*The area (in hectares) of the geographical location of land to be used for the cultivation of the opium poppy"* and *"The approximate quantity of opium to be produced."* This reporting requirement was part of the 1953 Opium Protocol, but had been superseded by the 1961 Single Convention.[170]

An additional article on the '*Limitation of Production of Opium'* was intended to create economic incentives for licit opium exporting countries to keep controls up to standard. This passage empowered the INCB to deduct from such a country's licit opium production quota for the next year any amounts which the Board considered to have been introduced into the illicit traffic, either from illicit or excess licit production. Countries prohibiting the cultivation of the opium poppy or the cannabis plant were also bound to "*seize any plants illicitly cultivated and destroy them…*" This amendment was to require states to enforce the laws on their books against the cultivation of illicit drugs. Recognising that not all states had equal capacity to fulfil this obligation, the concept of international assistance to enable governments to implement the Convention was introduced. The new Article 14 dealt with 'Technical and Financial Assistance' to be provided by competent United Nations organs and specialized agencies to implement the Convention.[171]

The Protocol also expanded the scope of Article 38 "Treatment of Drug Addicts" to 'Measures against the Abuse of Drugs'. Under the new provisions, countries did not only have a legal obligation to treat and reha-

bilitate drug addicts, they also had a legal obligation to "*take all practicable measures for the prevention of abuse of drugs and for the early identification ... of the persons involved*" and to provide for the "*social reintegration*" of such persons.[172] Regarding the penal provision, the Protocol provided possible alternatives to incarceration. Parties could substitute measures of treatment for conviction or punishment for those implicated in the "*cultivation, production, manufacture, extraction, preparation, possession, offering, offering for sale, distribution, purchase, sale, delivery, brokerage, dispatch, dispatch in transit, transport, importation and exportation of drugs contrary to the provision of the Convention.*"[173] Finally, the Protocol included a number of stipulations to improve the effectiveness of the controls implemented by the INCB, in addition to giving the INCB responsibility for ensuring a balance between supply and demand for narcotic drugs for medical and scientific purposes.[174]

Around the time of the Protocol, a number of other measures were taken to improve the global approach to drugs. As noted above, the United Nations Fund for Drug Abuse Control (UNFDAC) was created in 1972 to assist drug producing countries with crop substitution and alternative development programs. Major successes in illicit curbing opium production were achieved in particular in Thailand, partly linked to alternative development assistance projects assisted by UNFDAC, the Thai Government and other donors. Turkey also decided to prohibit all planting, cultivation or production of opium poppy after June 30, 1972. [175] In September 1974, the government of Turkey informed the United Nations that it would again permit the licensed cultivation of poppies for medical purposes,[176] but this time it would make use of the poppy straw method, which is less prone to diversion. These controls appear to have worked well and no reports of diversion of opium from licit channels were received thereafter. These efforts had a positive impact, temporarily reversing the upward trend in global heroin consumption experienced over the previous years.

2.4.4 The 1971 Convention on Psychotropic Substances

After World War II, Japan suffered a major epidemic of methamphetamine abuse, due to the distribution of wartime stocks. This problem was addressed by a major market crack-down in 1954, and the passage of very strict legislation. In Europe, amphetamine use had become particularly widespread in Sweden and other Scandinavian countries, as well as in the UK, in the post-war years. A growing methamphetamine problem was also reported from the USA in the 1960s. Many of these drug problems initially appeared to have been regionally isolated phenomena, but a general upward trend in the use of synthetic drugs was seen globally.

As of the early to mid 1960s, most countries still imposed only minimal limitations on the distribution of amphetamines, barbiturates, tranquilizers and other synthetic, non-plant based drugs. As problems gained in intensity, domestic restrictions were introduced in several of the developed countries, prompting pharmaceutical companies to market their products more aggressively in less developed countries. The misuse of synthetic drugs thus became a truly global phenomenon and controversy emerged over the double standards applied to different classes of drugs.[177]

The first reaction was to add these psychotropic substances to the list of those controlled by the Single Convention, but this was potentially problematic for several reasons. The strict and cost intensive controls foreseen in the Single Convention were designed for a limited number of addictive substances with important but clearly defined use in medicine, mainly pain control. Broadening these provisions to cover a much wider range of substances might impose an unreasonable burden on the pharmaceutical industry, retarding innovation. It could also result in a weakening of the implementation of the Single Convention controls already in place. Based on these concerns, it became clear that a new treaty would have to be negotiated.

These negotiations proved to be difficult, because this time the drug producing countries were not the poor producers of the plant-based drugs, but some of the most powerful nations in the world. Fortunately, a group of equally powerful nations championed the cause, including the Scandinavian countries, which had been among the countries most affected by large-scale abuse of amphetamine-type stimulants, and the Soviet bloc. In the end, pharmaceutical interests who initially opposed the new controls came to see some merit in them, particularly for discouraging more marginal competitors. Nonetheless, it was in the interest of the pharmaceutical companies to keep new controls to a minimum.[178]

The resulting compromise was still a major step ahead for international drug control. The 1971 *Convention on Psychotropic Substances* placed under international control for the first time a number of amphetamine-type stimulants, hallucinogens (such as LSD), sedative hypnotics and anxiolytics (benzodiazepines and barbiturates), analgesics and antidepressants. A significant number of additional substances were added in subsequent decades.[179] Seventy-one states attended the plenipotentiary conference as well as the World Health Organisation, ICPO/INTERPOL[180] and a number of representatives from various pharmaceutical companies. The Convention entered into force in August 1976. As of March 2008, 183 countries were party to the 1971 Convention, equivalent to 95% of all UN States Members.[181]

The 1971 Convention consists of 33 Articles, and is based on the 1961 Convention, though it also contained some innovations. The parties agreed that all listed substances only be supplied with a medical prescription. Advertisement of these substances to the general public is prohibited and appropriate cautions and warnings have to be indicated on the labels and the accompanying leaflets. Parties to the Convention must also take, according to Article 20 §1, "*measures for the prevention of abuse of psychotropic substances and for the early identification, treatment, education, after-care, rehabilitation and social reintegration of the persons involved*". According to Article 8 (a) a general system of licensing has to be introduced for the manufacture, the domestic and international trade and the distribution of psychotropic substances.

Article 15 deals with inspection requirements. Parties have to maintain a system of inspection of manufacturers, exporters, importers, wholesalers, distributors, and medical and scientific institutions. A Party may also notify all other Parties through the Secretary-General that it prohibits the import into its country of one or more of the psychotropic substances and the other countries must then take measures to ensure that none of the substances specified in the notification are exported to the notifying country. Article 21 foresees a number of measures to fight the illicit traffic in these substances, mainly asking for mutual assistance in the area of law enforcement and judicial cooperation.

In addition to these general regulations, the Convention established four different Schedules for psychotropic substances with specific controls applying to each. Scheduling is based on two criteria: the potential therapeutic value and the potential risks related to the consumption of a substance.[182] The risks warranting scheduling, to be identified by the World Health Organisation, are the capability of a substance to create a state of dependence, the abuse potential, and evidence that the substance concerned is being abused or is likely to be abused so as to constitute a public health and social problem.[183] The scheduling of substances under the *1971 Convention* is therefore potentially more restrictive than the scheduling of opiates or cocaine related substances under the *1961 Convention*.

Schedule 1 lists those substances which are prohibited except for scientific and very limited medicinal purposes. The very strict provisions of Schedule 1 only allow for the manufacture, trade, distribution or possession of these substances subject to special licences, always under close government supervision and tight restrictions on the amounts to be supplied. Exports and imports are restricted to trade between the competent authorities or agencies of the exporting and importing country, or persons or enterprises specifically authorized by the competent authorities. Substances currently found under Schedule 1 include MDA and MDMA (Ecstasy), for which there is only very limited recognized therapeutic use. Normal commercial transactions for Schedule I substances, are, in general, very difficult.

Schedule II substances may have a strong abuse potential or be widely abused, but they also have properties which lend themselves to be utilized for generally recognized therapeutic use. Several of the amphetamine-type stimulants, including methamphetamine, amphetamine, methylphenidate and fenetylline fall into this category, as well as one hallucinogen (phencyclidine) and a few sedative-hypnotics (methaqualone and secobarbital).[184] Commercial transactions for such substances are possible, though these substances remain strictly controlled. Manufacturers, wholesale distributors, exporters and importers have to keep records showing in detail the quantities manufactured, each acquisition and disposal, the date, supplier and the recipient. They also require separate import and export authorizations. The national authorities must also furnish the INCB annual statistics with regard to the quantities manufactured, exported to and imported from each country, and on the stocks held by manufacturers for Schedule I and Schedule II substances. Global manufacture and trade flows can thus be closely monitored.

Control of Schedule III and Schedule IV substances is less strict. Substances presently under control in Schedule III include, *inter alia,* cathine (a central nervous system stimulant), some barbiturates (amobarbital, cyclobarbital, pentobarbital), flunitrazepam (the most frequently abused benzodiazepine), buprenorphine (an opioid used in several countries in substitution treatment), and pentazocine (an opioid analgesic which is reported to be widely abused in some African countries). For Schedule III substances, no separate import or export authorizations are required. Record keeping requirements are less strict. National authorities must only provide the Board with aggregate information on the quantities manufactured, exported and imported. Most of the substances in Schedule IV are benzodiazepines, including diazepam, or barbiturates, such as phenobarbital. No separate import or export authorizations are required for these Schedule IV substances. Record keeping requirements are limited to showing the total quantities of the specific drugs manufactured, exported and imported. Similarly, national authorities must only provide the Board with aggregated (i.e. not detailed) information on the quantities manufactured, exported and imported.

If the Board has reason to believe that the aims of the Convention are being seriously endangered by the failure of a country to carry out the provisions, the Board can call the attention of the Parties, the Economic and Social Council and of the Commission on Narcotic Drugs and recommend to the Parties that they stop the export, import or both of particular psychotropic sub-

stances from or to the country concerned.

Like the Single Convention, the 1971 Convention also defined the respective roles of the INCB and the Secretary General. While the Board is charged primarily with monitoring the licit manufacture and trade in psychotropic substances, the Secretary General (today, the UNODC) is primarily concerned with the illicit side. Governments must furnish information with regard to "*Significant developments in the abuse of and the illicit traffic in psychotropic substances"…*(Article 16, §1 (b)), notably "*in respect of any case of illicit traffic in psychotropic substances or seizure from such illicit traffic which they consider important because of (a) new trends disclosed, (b) the quantities involved, (c) the light thrown on the sources from which the substances are obtained; or (d) the methods employed by the illicit traffickers"*(Article 16, §3).[185]

2.4.5 The 1981 International Drug Abuse Control Strategy and the 1984 Declaration

Despite the efforts made over the previous decades, sharp increases in drug abuse were again noted toward the end of the 1970s in many countries. Initial progress made in curbing the global heroin problem had stalled as the void created by the strengthening of controls in Turkey in the early 1970s was soon filled by rising opium production in Mexico and in the Golden Triangle.[186] There was also an increase in opium production and diversion from Iran. This ceased following the Islamic Revolution. After 1979, there was a slow shift of opium production to neighboring Pakistan and eventually to Afghanistan. Cannabis production and consumption increased worldwide, with production increasing in Latin America and consumption in North America and, to a lesser extent, in Europe. Many states in the USA softened controls on cannabis use in the 1970s after the appearance of 1973 report by the *Commission on Marihuana and Drug Abuse* (NCMDA) that concluded that the possession of small amounts of marijuana should be decriminalized.[187] In parallel, illegal cocaine production from the Andean region increased dramatically from the early 1970s and cocaine started to emerge as a serious problem in North America beginning in the 1980s.

During this period, the Commission on Narcotic Drugs studied the possibilities of launching a comprehensive strategy to reduce international drug abuse. In 1981, an *International Drug Abuse Control Strategy*[188], containing a basic five-year Programme of Action (1982-1986), was formulated. The Strategy called for international co-operation to combat drug abuse and trafficking with the following objectives:

- improvement of the drug control system,
- maintenance of a balance between legitimate drug supply and demand,
- eradication of illicit drug supply
- reduction of illicit traffic
- reduction of illicit demand and prevention of drug abuse, and
- treatment, rehabilitation and social reintegration of drug abusers.

The Strategy also called for various organizations and agencies operating within the United Nations system to provide increased support to assist Governments in activities such crop-substitution, drug law enforcement and preventive drug education programmes.

The status of the implementation of the Drug Abuse Control Strategy was reviewed each year through reports of the Economic and Social Council (ECOSOC) to the General Assembly on the production, manufacture, shipping and distribution of drugs. Though these reports suggested that the world community was strengthening the efforts in the on-going battle against illegal drug production, trafficking and abuse, the same reports also suggested that there was, in fact, an ongoing deterioration of the situation, notably due to rapid increase in the level of sophistication of the global networks of illegal drug traffickers.

In December 1984, the General Assembly adopted a '*Declaration on the Control of Drug Trafficking and Drug Abuse,*[189] which effectively enabled states to highlight the links between the illicit drug markets and economic and social development. The Assembly declared that the "*illegal production of, illicit demand for, abuse of and illicit trafficking in drugs impede economic and social progress, constitute a grave threat to the security and development of many countries and people and should be combated by all moral, legal and institutional means, at the national, regional and international levels*". Its eradication, the Assembly resolved, was the collective responsibility of all States. The Declaration then went on to state that States Members should, "*undertake to intensify efforts and to co-ordinate strategies aimed at the control and eradication of the complex problem of drug trafficking and drug abuse through programmes including economic social and cultural alternatives*".

2.4.6 The 1987 Declaration and the Comprehensive Multidisciplinary Outline for Future Activities

The global situation with regard to drug production, trafficking and abuse did not improve in the 1980s. Illicit opium production in Myanmar continued at high levels and Afghanistan started to emerge as a key illicit opium producing country. Illegal coca leaf production and resulting cocaine manufacture in the Andean region

was growing dramatically. Cannabis production and consumption remained high, although there was significant eradication with longstanding consequences in several countries of Latin America. The situation was summarized as follows: "*The upsurge of drug addiction since the 1960s represents a previously unknown phenomenon, at least as far as its dimensions are concerned. Addiction has spread over the entire planet, sparing almost no nation, no social class and no age, regardless of sex and race. The damage caused to the physical psychological and social health of individuals and of communities has made drug addiction a public hazard on the world scale. Addiction has become a matter of serious concern to many Governments, for its affects public and social health and economic resources…* "[190]

Against this background, a renewed effort to address the drug problem at the global level was undertaken in 1987, as the Secretary-General called for an international conference to deal, for the first time at the ministerial level, with drug abuse and illicit trafficking.[191] The political declaration adopted at the 1987 Conference reaffirmed the political will to take vigorous action against drug abuse and trafficking and to set benchmarks for progress towards the long-term goal of a society free from drugs. The declaration also reconfirmed the collective responsibility of Governments to provide appropriate resources for the elimination of illicit production, trafficking and drug abuse. *"In evolving effective action against drug abuse, illicit production and trafficking, we emphasize the need for the international community to adopt measures to treat all aspects and causes of the problem".*[192]

Another outcome of the conference was the adoption of guidelines for dealing with the reduction of supply, trafficking and demand of illicit drugs, summarized under the title: *Comprehensive Multidisciplinary Outline for Future Activities* (CMO). The CMO was divided into four chapters (prevention and reduction of the illicit demand, control of supply, suppression of illicit trafficking, treatment and rehabilitation) and contained 35 targets defining problems with subsequent suggested courses of action.

The CMO gained greater importance after being mentioned in the Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988, which stipulates that, "*The Parties shall adopt appropriate measures aimed at eliminating or reducing illicit demand for narcotic drugs and psychotropic substances…These measures may be based, inter alia, … on the Comprehensive Multidisciplinary Outline adopted by the International Conference on Drug Abuse and Illicit Traffic, held in 1987, as it pertains to… prevention, treatment and rehabilitation*". In addition, many of the recommendations made with regard to the suppression of illicit trafficking and the control of supply are reflected in the 1988 Convention.[193]

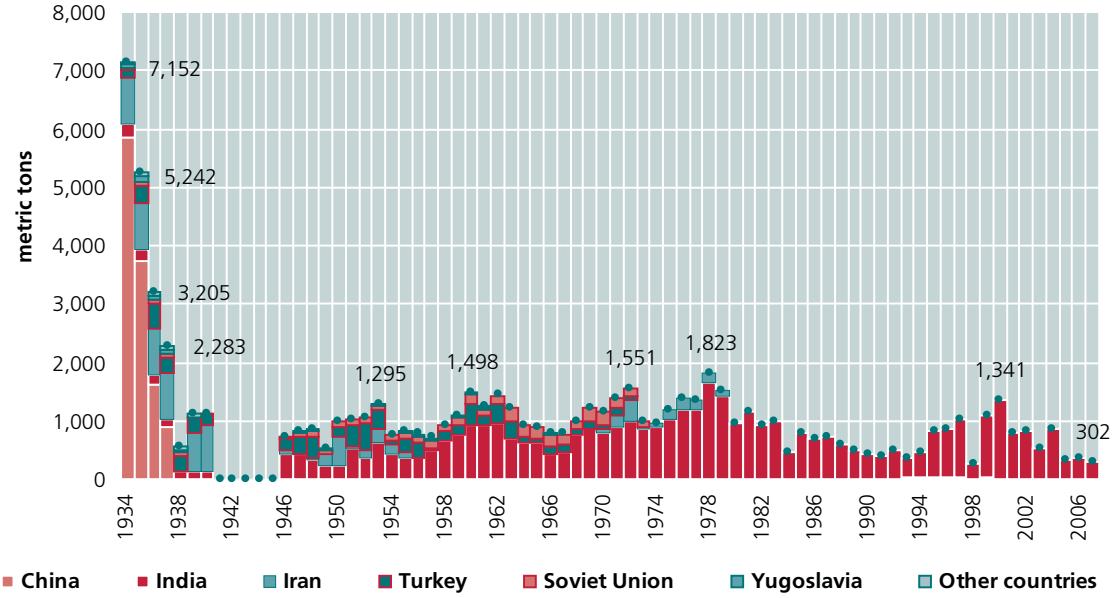
One of the main achievements of the CMO was the introduction of the concept of a balanced approach in dealing with the drug problem.[194] In Chapter I, the CMO discussed the supply control model versus the demand control model. The CMO concluded: "*For the purpose of dealing with the totality of the problems posed by drug abuse and illicit trafficking, both the supply of and the demand for drugs should be reduced and action should be taken to break the link between demand and supply, that is, the illicit traffic."*[195]

The CMO called for research to assess the extent of drug abuse. This would involve the establishment of information collection, analysis and dissemination activities at the national level, including the systematic collection of data from records of the police, registers of deaths, courts (including coroners' courts), hospital emergency rooms, drug treatment centres, prisons, mental hospitals, psychiatric clinics, correctional institutions, social security and welfare organizations, schools and universities, the armed forces, employers, trade unions, and community agencies.

The CMO recommended the implementation of an 'early warning' system which would help to identify trends in use, investigate the causes, and propose recommendations for dealing with the situation. It then promoted the development of 'national education programmes', including drug abuse prevention curricula in all educational institutions. In addition, the CMO addressed the dangers of drug abuse at the workplace, asking employers' and workers' organizations to develop joint action programmes with a view to discouraging drug abuse. It also highlighted the role of cultural and sport activities as alternatives to drug abuse and the importance of film and other media for discouraging rather than glamorizing the use of illicit drugs.

Chapter II advocated the reinforcement and extension of measures for controlling the supply of drugs. This included the identification and mapping of areas under illicit cultivation, as well as undertaking studies to determine how the livelihood of rural populations would be affected by the discontinuance of illicit cultivation. The CMO promoted transitional economic and financial assistance to assist farmers and encouraged the United Nations system to seek funds for integrated rural development projects in support of the eradication of illicit plantings and crop substitution programmes. However, it also made it clear that such assistance had to be contingent on the commitment of recipients to abandoning illicit cultivation, though the ban could be imposed in stages. Another key area for action was seen in the control of precursor chemicals. Chapter III dealt with the suppression of illicit trafficking in precursors, promoting the use of controlled deliveries, profiling, facilitation of extraditions, and measures against money laundering.

Fig. 23: Reported licit opium production, 1934-2006



Sources: INCB, *2007 Narcotic Drugs,* New York 2008 and official data published by the League of Nations, the Permanent Central Opium Board and the International Narcotics Control Board, compiled in Francois Xavier Dudouet, PhD Dissertation "*Le contrôle international des drogues, 1921-1999*", Université Paris X Nanterre, 2002.

Chapter IV discussed in detail the problems related to treatment and rehabilitation, stressing again the importance of evaluations to improve the effectiveness of treatment outcome. The CMO saw drug addiction as a chronic recurring disorder which responds to treatment. It argued, however, that several treatment episodes may be necessary before long-term abstinence is realized. The CMO stressed the importance of seeking out drug addicts in their customary environment with a view to guiding them towards treatment and that treatment centres should carry out 'individualized' treatment programmes. In terms of diseases transmitted through drug using habits, such as HIV/AIDS and hepatitis, the CMO recommended, notably where such infections tend to become a health hazard to larger segments of society and where the drug-using habits cannot be stopped immediately, to invite experts to study possible prophylactic measures. Such measures, however, should not promote or facilitate drug abuse.

2.4.7 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988

By the late 1980s the international drug control system had been successful in restricting the licit production of opium and coca to the actual legal requirements. Some diversions from licit channels still occurred, but they had ceased to be a major problem at the global level. The same applied to most Schedule I and Schedule II substances controlled under the *1971 Convention on Psychotropic Substances*. The situation was less positive for several of the Schedule III and Schedule IV substances. Their misuse was still widespread in many countries. Taken together, the controls on the licit side were generally working well and showing good results.

On the other hand, illicit production of opium/heroin and of coca/cocaine continued rising through the 1980s, as did trafficking and abuse in these substances. In addition, some psychotropic substances, notably the amphetamine-type stimulants, were starting to be manufactured in clandestine laboratories in North America, Europe and South-East Asia. The situation was steadily and rapidly deteriorating and drug abuse was described as reaching epidemic proportions in many parts of the world.[196] All countries in the world seemed to be vulnerable to drug trafficking and abuse, regardless of geographical location, political orientation and stage of economic development.[197]

The problem was exacerbated by increasing levels of violence and sophistication among the transnational organized crime groups which were facilitating the transit and marketing of these drugs. The Medellin and Cali cartels, operating out of Colombia, controlled much of the cocaine trade from Colombia to the United States and other countries. They were not only trafficking ever

larger amounts of cocaine to North America and Europe, but also started to become a serious threat to security and governance.[198] They made use of the assets generated from the cocaine business to corrupt the local and national authorities and, when this did not prove to be successful, turned to large-scale violence to intimidate the political decision makers. This was made explicit by the minister of justice of Colombia, Guillermo Plazas Alcid, who, addressing the 1988 Conference in Vienna, stated that "*Illicit drug traffic menaced the health and well-being of individuals, spread corruption, abetted criminal conspiracy and subverted public order. It threatened the sovereignty and security of States and disrupted the economic, social and cultural structure of society*.[199]

Against such a background the General Assembly requested that the Commission on Narcotic Drugs, "*initiate, as a matter of priority, the preparation of a draft convention against illicit traffic in narcotic drugs which considers the various aspects of the problem as a whole, in particular, those not envisaged in existing international instruments."*[200] Thus, the United Nations Conference for the Adoption of a Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances met in Vienna from 25 November to 20 December 1988. Delegations from 106 States participated in this conference. The Conference drew up and adopted a new *Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances*.[201]

The 1988 Convention, consisting of 34 Articles, entered into force just two years later, on 11 November 1990 and has proven to be a powerful instrument in the international struggle against drug trafficking. As of March 2008, 183 countries were parties to this Convention.[202]

Some of the obligations of this Convention are rather far-reaching, going beyond those contained in earlier Conventions. This raised fears that they could be misused by some countries for other political objectives. In order to dissipate such fears, Article 2 §2 makes it clear that, "*The Parties shall carry out their obligations under this Convention in a manner consistent with the principles of sovereign equality and territorial integrity of States and that of non-intervention in the domestic affairs of other States.*"

The Convention is clearly directed against drug traffickers.[203] The 1961 Convention only obliged Parties to make trafficking activities 'punishable offences', but the 1988 Convention obliges Parties to make them a 'criminal offences'. Article 3, §2 also specifies that, "*the possession, purchase or cultivation of .. drugs… for personal consumption*" should be established as a criminal offence. This goes beyond the requirements of the previous conventions. This has been, and continues to be, a controversial stipulation for some countries. The Commentary to the 1988 Convention reveals a number of legal interpretations of this Article and notes the legal loopholes that could be used by countries which oppose making the possession of drugs for personal use a criminal offence.[204] In any case, Parties can - according to Article 4 (c) of the 1988 Convention - provide *"in cases of a minor nature… alternatives to conviction or punishment such as education, rehabilitation or social reintegration as well as … treatment and aftercare…"*

The 1988 Convention was unique in its focus on the prevention of money laundering. Much of the subsequent work done in this area by various players, including the Financial Action Task Force of the OECD, has been based on the 1988 Convention. In principle, money laundering would have already been a punishable offence under the 1961 Convention, referred to as "financial operations in connexion with the offences referred to in this article …" But, this obligation, hidden in the text of the 1961 Convention, had been largely 'forgotten' by most countries prior to the more explicit formulations contained in the 1988 Convention. In Article 3 §1 (b) drug related money laundering ("*conversion or transfer of property, knowing that such property is derived from an offence established in subparagraph (a)*) is established as a criminal offence and Article 3 §1 (a) (v) establishes that the financing of any of the drug trafficking related offences, when committed intentionally, must be a criminal offence. In targeting criminal proceeds, the convention also asked for the '*confiscation*' of proceeds derived from drug related offences.[205] Moreover, courts have to be empowered to seize bank, financial or commercial records.[206]

A major achievement of the 1988 Convention was the establishment of precursor control at the international level. Trade in precursor chemicals for the manufacture of illegal drugs was, in theory, already a punishable offence under the 1961 Convention. It could have been subsumed as a 'preparatory act', for example, but very few countries had implemented precursor legislation prior to the 1988 Convention. The 1988 Convention establishes that the manufacture, transport or distribution of equipment used in the manufacture of illicit drugs as well as the manufacture, transport or distribution of precursor chemicals, knowing that they are used for the illicit manufacture of drugs, should be deemed criminal offences. In Article 12, the Convention went several steps further and set out an international precursor control regime that is monitored by the International Narcotics Control Board. Substances frequently used in the illicit manufacture of narcotic drugs or psychotropic substances were identified and listed in two Tables, with a stricter controls foreseen for Table I substances. The general obligation of Parties with regard to precursor control is laid down in Article 12, §8. It stipulates that Parties have to "*take the measures they deem appropriate to monitor the manufacture and distribution of substances*

in Table I and Table II which are carried out within their territory."

The scope of criminal offences for which extradition can be sought was enlarged in the 1988 Convention. Acts such as money laundering, or the manufacture, transport, distribution of equipment and of substances listed in Table I and II (precursor chemicals) became extraditable offences.[207] Otherwise, the extradition rules (Article 6) do not deviate substantially from what was already laid down in the previous drug conventions. They are largely based on the concept of incorporating drug related offences into extradition treaties between States (Article 6 §2).

Though the 1988 Convention tends to promote the concept of extradition it also provides for some escape clauses, notably if the authorities in a country believe that compliance would facilitate the punishment of a person "*on account of his race, religion, nationality or political opinions..*" It also makes extraditions "*...subject to the conditions provided for by the law of the requested Party...*" In fact, a number of national legal traditions do not allow for the extradition of nationals to foreign countries, partly based on constitutional principles.[208] In such a case, Article 4 §2 stipulates that the Party which refuses to extradite a person to another country on the ground that the offence has been committed by one of its nationals must then "*take such measure as may be necessary to establish its jurisdiction over the offences."* In general, the national laws of many countries have, however, become more favourable towards extraditions over the last two decades.

Another innovation in the 1988 Convention is the endorsement of 'controlled deliveries', defined as "*the technique of allowing illicit or suspect consignments of narcotic drugs, psychotropic substances in Table I and Table II… to pass out of through or into the territory of one or more countries with the knowledge and under the supervision of the competent authorities...with a view to identifying the persons involved"* in drug trafficking offences and *"taking legal action against them."* The most obvious attraction of this law enforcement strategy is that is facilitates the identification, arrest and prosecution of the principals, organizers and financiers in the criminal venture in question instead of merely arresting those involved at the lower level in the hierarchy. Such action can significantly contribute towards the general goal of disrupting and dismantling drug trafficking organizations.[209]

Though the 1988 Convention was geared towards reducing illicit traffic in drugs, it also obliges Parties to prevent or reduce the supply of drugs, requiring each Party has to, "*take appropriate measures to prevent illicit cultivation of and to eradicate plants containing narcotic or psychotropic substances, such as opium poppy, coca bush and cannabis plants, cultivated illicitly in its territory."*

The subsequent sentence in Article 14 §2 created some confusion: "*The measures adopted shall respect fundamental human rights and take due account of traditional licit uses, where there is historic evidence of such use, as well as the protection of the environment."* The reference to 'traditional licit uses' was interpreted by some countries in the Andean region (Bolivia and Peru) as an acknowledgement by the international community that such 'traditional licit uses' still existed and that 'due account' for such 'traditional licit uses' would have to be taken, including for sufficient production to satisfy these 'traditional licit uses' (coca chewing, 'mate de coca' tea). In contrast, the 1961 Convention had already outlawed the habit of coca leaf chewing, opium smoking, the quasi-medical use of opium and the non-medical use of cannabis, and the production of drug crops for such purposes. Countries could ask for transitional reservations under the 1961 Convention to enable people registered by 1964 to continue with their habits. The maximum transitional period granted by the 1961 Convention ended for opium in 1979 and for cannabis and the coca-leaf on 12 December 1989.[210] Under Article 14 §1 of the 1988 Convention, however, it is made explicit that *"Any measures taken pursuant to this Convention by Parties shall not be less stringent than the provisions applicable to the eradication of illicit cultivation of plants containing narcotic and psychotropic substances … under the provision of the 1961 Convention…".*[211] Thus, the INCB has pointed out the existing international drug conventions, including the 1988 Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, do not provide for licit production for 'traditional licit use'.[212]

In Article 14 §3 addresses the concept of alternative development. "….*Such co-operation may, inter alia, include support, when appropriate for integrated rural development leading to economically viable alternatives to illicit cultivation. Factors such as access to markets, the availability of resources and prevailing socio-economic conditions should be taken into account…"* Paragraph 3 does not directly create an obligation on parties, but it draws attention to the need, in some countries, for alternative development programmes that are designed, in effect, to rebuild a local economy hitherto partly or entirely based on illicit cultivation.[213]

On the demand side, parties to the 1988 Convention also must adopt "*appropriate measures aimed at eliminating or reducing illicit demand for narcotic drugs and psychotropic substances…."*[214] This required Parties to adopt appropriate measures to eliminate illicit demand for narcotic drugs and psychotropic substances, "with a view to removing the financial incentives for illicit traffic."

2.4.8 Special Session of the General Assembly June 1998

In the first half of the 1990s, the measures taken in compliance with the 1988 Convention proved to be successful in dismantling some of the world's largest criminal networks, such as the Medellin and the Cali cartels operating out of Colombia. Extraditions for drug related offences became more common. Progress was also made against drug related money laundering. For example, the Financial Action Task Force (FATF), founded in 1989 under the auspices of the OECD, developed an initiative to combat the misuse of financial systems by persons laundering drug money. This resulted in 40 recommendations, drawn up in 1990, which were regularly updated and increasingly developed into global standards, assisting participating states to reduce the vulnerability of their financial systems.[215] The first positive results were also made in the area of precursor control. Controlled deliveries gained in importance. In fact, most of the provisions of the 1988 Convention were implemented by a growing number of countries.

The dismantling of some of the large drug networks was important to reduce their capabilities to infiltrate and corrupt whole political systems, but the end of these large groups did not stop drug trafficking. A large number of smaller drug trafficking groups took their place. The downward trend in drug abuse, seen in the second half of the 1980s, did not continue in the USA after 1991/92. Europe was faced with major increases in drug abuse, from cannabis to various ATS, cocaine and heroin. The end of communism also precipitated growing levels of drug consumption, notably among youth, in the transition countries of Central and Eastern Europe. Drug abuse also emerged increasingly as a serious social problem in many developing countries, notably in countries along the main transit routes. ATS, notably methamphetamine, emerged as an ever more serious problem in many countries of East and South-East Asia. Countries in Latin America, which were primarily producer and transit countries, started to become increasingly affected by cocaine abuse. Countries in Africa suffered from ever larger cannabis production and consumption and ongoing diversions of pharmaceutical drugs into parallel markets.

Against this background, a new initiative was taken by the international community to address the world drug problem. Following preparations for more than two years, a special Session of the United Nations General Assembly (UNGASS) took place from 8-10 June 1998. It was devoted to reflecting on the effectiveness of the international drug control system and to come up with new ideas on how best to counter the world drug problem. In his opening statement, UN Secretary-General Kofi Annan made reference to the drastic proliferation of drugs over the previous 30 years and expressed his hope that "*when historians study the work of humankind in the field of drug control, they will write about the next few days as the point where this trend was reversed.*"[216]

The UNGASS adopted, unanimously, a '*Political Declaration*' and linked to it the '*Guiding Principles on Demand Reduction*' as well as a number of measures to enhance international cooperation to counter the world drug problem, notably sections devoted to the:

- '*Action plan against manufacture, trafficking and abuse of ATS and their precursors*'
- '*Control of precursors*';
- '*Measures to promote judicial cooperation*'
- *'Countering money laundering';*
- '*Action plan on international cooperation on the eradication of illicit drug crops and on alternative development*'.

The Political Declaration adopted by the United Nations General Assembly consists of a preamble and 20 paragraphs.[217] In the first operative paragraph, the States Members of the United Nations reaffirm the "*unwavering determination and commitment to overcoming the world drug problem through domestic and international strategies to reduce both the illicit supply of and the demand for drugs.*" The obligation of countries to follow a balanced approach was thus reconfirmed.

In the second paragraph, States Members, "*Recognize that action against the world drug problem is a common and shared responsibility requiring an integrated and balanced approach in full conformity with the purposes and principles of the Charter of the United Nations and international law, and particularly with full respect for the sovereignty and territorial integrity of States, non-intervention in the internal affair of States and all human rights and fundamental freedoms...*" Four items are important here:

- the concept of "*shared responsibility*" (previously referred to as 'collective responsibility' in the 1984 Declaration on the Control of Drug Trafficking and Drug Abuse),
- the "*balanced approach*" (the term as such was used here for the first time in a legal international document, though the concept had been known and accepted at the international level, at least, since the 1987 Multidisciplinary Comprehensive Outline),
- the respect of '*sovereignty, territorial integrity*' and thus the '*non-intervention into internal affairs*' (all of these were also mentioned in previous treaties) and,
- for the first time, the linking of drug control to the '*Charter of the United Nations,* '*human rights*', and *fundamental freedoms*.

The declaration is comprehensive, reflecting States Members' desire to view the illicit drug problem in as wide a context as possible. The 1998 Political Declaration was the first legal document linking drug production/trafficking and terrorism. In §10, concern is expressed about the links between illicit drug production, trafficking and terrorist groups, and cooperation is pledged in response to these threats. In §11 a link is made between illicit drug production and illicit trafficking in drugs and arms and states are called to increase cooperation in stemming illegal arms trafficking.

Following these rather general calls for cooperation, §13-§19 represent the core of the Political Declaration. Reference is made to the various Action Plans detailed in the document (regarding ATS, precursors, money laundering, judicial cooperation, demand reduction and elimination of narcotic crops). The year 2003 is set as the target date for the introduction of the measures foreseen and the year 2008 as the target date by which significant and measurable results should be achieved in the field of demand reduction and the reduction in the illicit cultivation of coca bush, cannabis, and opium poppy, as well as the illicit manufacture, marketing and trafficking of psychotropic substances, including synthetic drugs, and the diversion of precursors.

States are requested to take into account the outcome of that session when formulating national strategies and programmes and are called to "*report biennially to the Commission on Narcotic Drugs on their efforts to meet the above-mentioned goals and targets for the year 2003 and 2008, and request the Commission to analyse these reports in order to enhance the cooperative effort to combat the world drug problem."* To assist with international monitoring of these efforts, the Biennial Reports Questionnaire (BRQ) was developed, regularly 'reminding' States Members of their obligations and providing a framework for donors to invest in target areas identified in the Political Declaration and the accompanying Action Plans.

In contrast to the international drug conventions, there are no procedures foreseen in the Political Declaration to have an independent evaluation of the implementation of the Political Declaration and the accompanying Action Plans – §20 only declares that the CND should analyse the reports obtained from States Members and use this information to enhance the cooperative efforts to fight the drug problem. While the drug conventions foresee that in case of non-compliance by an individual state the INCB could impose international sanctions, no formal sanction mechanisms are foreseen for non-compliance with the Political Declaration and the accompanying Action Plans.

Under the Convention, States Members have provided self-evaluations on the degree of progress made in their BRQ returns. Analysis of these responses suggests that the overall implementation of the Political Declaration, the Action Plans and the proposed measures improved from 51% over the 1998-2000 period to 60% over the 2006-07 period. But this is a 'process evaluation', a report on the efforts made. No provision was made for an 'outcome evaluation', or an analysis of the extent to which efforts have had real impact, due to the fact that, for the majority of countries, baseline data on the demand and the supply side were not available in 1998.

The Political Declaration proved to be a valuable tool as it encouraged a number of countries to renew their efforts in the area of drug control and strengthen international cooperation. Major successes were made in reducing the area under coca cultivation, for instance, in Peru and Bolivia in the 1990s, and in Colombia after 2000. Morocco reduced its cannabis resin production significantly over the 2003-2005 period. Major successes were also achieved in South-East Asia, notably by Myanmar and the Lao PDR, in reducing opium production, following the achievements made by Thailand over the previous three decades. These successes were, however, overshadowed by the rapid expansion of opium production in Afghanistan.

Demand data, where available, suggest that drug use stabilized or fell in the United States and that the strong upward trend reported in Europe in the 1990s gave way to signs of stabilization (except for cocaine) in recent years. Demand for drugs in a large number of developing countries, however, appears to have continued rising.

One of the main achievements of the UNGASS process in 1998 was the elaboration of a *'Declaration on the Guiding Principles of Drug Demand Reduction.*[218] Demand reduction at the international level was, until then, governed by rather brief treatment in the international drug conventions. Some international guidance existed in the recommendations of the 1987 Comprehensive Multidisciplinary Outline (CMO). The 1988 Convention suggested that countries refer to the CMO in developing their demand reduction measures, but it did not make their use compulsory. In contrast, the 'Declaration on the Guiding Principles of Drug Demand Reduction' provides States with detailed principles of how to design their national strategies with regard to demand reduction.

The main innovation of the Guiding Principles was that demand reduction policies should not only aim at preventing the use of drugs, but also at "reducing the adverse consequences of drug abuse," bringing to the fore a longstanding debate concerning "harm reduction". The United States, the Russian Federation, Japan, China, and several developing countries are in favour of tradi-

tional demand reduction efforts (prevention and treatment) in order to reduce or keep drug use levels low. Most European countries, Australia, and Canada have long advocated that these efforts be supplemented with harm reduction programmes, such as needle exchange, often in the context of keeping drug use-related HIV/AIDS rates low.

The 1998 Declaration on the Guiding Principles makes it clear that both elements, the 'prevention of drug use' and the 'reduction of adverse consequences' should be present in demand reduction policies[k]. The International Narcotics Control Board (INCB) had already acknowledged in 1993 that harm reduction had a role to play in a tertiary prevention strategy; however the Board pointed out that such harm reduction programmes should not be carried out at the expense of, or be considered substitutes for, activities designed to reduce the demand for illicit drugs, and that they should not promote and/or facilitate drug abuse.[219]

Self-evaluations by States Members suggest that the Guidelines on Demand Reduction influenced the measures taken at national level. The Biennial Reports Questionnaire returns suggest an improvement in the overall implementation rate from, on average, 23% over the 1998-2000 period to 29% over the 2006-07 period (average of the composite indices for 'prevention', 'treatment' and 'reducing negative consequences'). This improvement is off a very low global base, however, since demand reduction is, for many countries, a new concept, in contrast to the extensive work done on the supply side.

In selected geographical regions, implementation rates were found to have been significantly higher. High rates for implementation of the proposed prevention measures were found in North America (81% in 2006/07) and in Oceania (70%). Low rates were found in Sub-Saharan Africa (25%). Similarly, in terms of treatment and rehabilitation, high implementation rates were reported from Oceania (69%) and North America (59%), while in Sub-Saharan Africa the implementation rate amounted to just 10%. In the case of measures aimed at reducing the negative consequences of drug use, the highest implementation rates were found in Oceania (76%), followed by West and Central Europe (50%) and North America (50%).

There were also significant differences in the implementation rates for specific activities. Provision of information and education as part of prevention programmes was shown to have risen from 34% in 1998-2000 to 42% in 2006/07 at the global level. The availability of prevention programmes in schools rose to 90%. In the area of reducing the negative consequences of drug use, measures such as needle exchange programmes rose from 39% to 52%.[220]

States Members at the General Assembly Special Session elaborated several *Action Plans* which were designed to refocus international attention and provide concrete steps to improving the work of the international community work in priority areas.

The preamble of the *Action Plan on International Cooperation on the Eradication of Illicit Drug Crops and on Alternative Development*[221] refers to a number of principles to be taken into account in the fight against drugs ('shared responsibility', 'integrated balanced approach', 'full respect of sovereignty', 'territorial integrity', 'non-intervention in internal affairs', 'human rights', 'fundamental freedoms', 'sustainable human development') and defines '*alternative development*' as a process "*to prevent and eliminate the illicit cultivation of plants containing narcotic drugs .. through specifically designed rural development measures in the context of … sustainable development efforts … recognizing the particular sociocultural characteristics of the target communities and groups…*".

The self-evaluations by States Members suggested that there were some improvements in the areas covered by this Action Plan. Over the 1998-2000 period, 30% of the countries had a National Plan (including alternative development) to reduce or eliminate the cultivation of illicit crops; this proportion rose to 42% in 2006/07. For National Plans including eradication and other law enforcement measures, the corresponding increase was from 37% to 46%. In terms of international cooperation for alternative development, the rates were lower and the improvement was only very moderate. The proportion of States reporting international cooperation in the area of alternative development and eradication programs increased from 17% to 21%. Monitoring and evaluation of alternative development and eradication programmes improved from 16% to 22%.[222] The average of the reported measures to implement the Action Plan (national plans, international cooperation, monitoring) shows an overall improvement in the implementation rate from 22% (1998-2000) to 29% in 2006-07. This level of implementation remains, however, less impressive than in several other areas, reflecting the fact that alternative development requires substantial financial resources.

Given the massive increase of ATS manufacture, trafficking and abuse in the 1990s, a special Action Plan was drawn up. This *Action Plan against Illicit Manufacture, Trafficking and Abuse of ATS and their Precursors* [223] consists of five chapters. The first two chapters deal with demand-related issues, the third with information (affecting both the demand and the supply side) and the

k For more detail see United Nations Office on Drugs and Crime, "Reducing the adverse health and social consequences of drug abuse: A comprehensive approach", Discussion paper, Vienna 1998l.

last two chapters with supply related issues. The chapters dealing with the supply-side contained a number over concrete obligations. The chapters dealing with the demand side, in contrast, were kept rather general.

Self-evaluations by States Members suggest that there was a growing adherence to the measures proposed in the Action Plan. The composite index developed on the basis of replies to the Biennial Reports Questionnaire (BRQ), showed an overall improvement in the implementation rate from 44% over the 1998-2000 period to 55% over the 2006-07 period. The composite index was based on a number of sub-indices which all showed improvements. At the subregional level, strong efforts to implement the ATS Action Plan were found in Oceania (96%), North America (94%), Central and Western Europe (63%) and in East and South-East Asia (62%).[224]

The *Control of Precursors* Action Plan calls on States Members to implement the already existing obligations under Article 12 of the 1998 Convention (dealing with precursor control), as well as repeating some of the proposals made under the ATS Action Plan.[225] Measures going beyond these requirements are few, and include new data collection requirements for Governments. According to §9, States, in cooperation with competent international bodies, should : (a) "*… establish… mechanisms… for obtaining data on the licit manufacture, import or export of precursors… and for the monitoring the movement of such substances, including the establishment of a register of public or private companies engaged in any activity relating thereto"*. No such crucial data collection requirements, needed for the identification of potential diversions, existed under the 1998 Convention. The proposed measures also went beyond the 1998 Convention in their demand for stronger controls for international trade in acetic anhydride (used in the manufacture of heroin) and potassium permanganate (used in the manufacture of cocaine).

Self-evaluations by States Members show that there was a growing compliance with the measures on precursor control, rising from 61% over the 1998-2000 period to 74% over the 2006-07 period. The rather high implementation rates were also a reflection of the fact that the proposed measures did not go much beyond already existing obligations under the 1988 Convention. Nonetheless, they signalled ongoing improvements of precursor control towards international standards (laid down in the 1988 Convention and re-confirmed in the UNGASS process). The analysis of the results reveals that States have well-developed legislation relating to the control of precursor chemicals (93%), prior import/export authorizations (94%) and established working procedures for monitoring and identifying suspicious transactions involving precursors (82%). Encouraging advances were made in a number of countries that received technical assistance, as well as in countries that had established procedures to investigate the diversion of chemicals. However, data also suggest that more needs to be done with regard to codes of conduct in cooperation with the chemical industry, making resources available for technical assistance and for international cooperation in seizing illicit consignments of precursor chemicals.[226]

The *Measures to Promote Judicial Cooperation Action Plan* dealt with recommendations to promote extradition, mutual legal assistance, transfer of proceedings, other forms of cooperation and training, controlled delivery, illicit traffic by sea and complementary measures.[227] The proposed measures were, by and large, already contained in the 1988 Convention, and the Action Plan simply served to make suggestions on implementation. For example, it makes reference to the availability of new information technology which could be used to speed up existing information exchange procedures. At the same time, the proposed measures were all formulated as 'recommendations', not as obligations.

Self-evaluations by States Members show that there was a growing compliance with the measures to promote judicial cooperation, rising from 63% (2000-2002) to 68% (2006-07). The high implementation rates are again a reflection that most of the measures had been already foreseen by the 1988 Convention. In the case of extraditions, the composite index showed an improvement from 75% to 77%. Overall, 90% of the countries reported that they had legislation on extradition procedures. The percentage of States Members not allowing the extradition of their nationals remained, however, high: 58% of the countries indicated that national law either precluded or seriously limited the extradition of nationals. Measures taken to comply with mutual legal assistance requirements improved from 69% to 79%. In terms of legislation permitting mutual legal assistance the improvement was even more pronounced (from 77% to 90%). The implementation rate for proposed measures to facilitate the transfer of proceedings was far lower, though rising as well (from 28% to 36%). Regarding law enforcement cooperation, the implementation rate improved from 73% to 79%. Measures taken in the area of controlled deliveries increased from 71% to 83%, suggesting that the use of this instrument has, by now, become common practice in many countries. The implementation of measures in the area of drug trafficking by sea improved from 37% to 52%. Surprisingly good results were achieved regarding the implementation of the newly recommended measures to protect judges, prosecutors, surveillance personnel, law enforcement officers and witnesses, rising from 63% to 79%.[228]

Like many of the other Action Plans, the measures proposed for countering money laundering are primarily

geared towards facilitating implementation of the 1988 Convention.[229] The primary innovation is contained in the third paragraph in the preamble. In this paragraph, the 40 recommendations established by the Financial Action Task Force (FATF) are enshrined as the global standard in anti-money laundering activities. Getting this adopted was problematic, as most States Members had not participated in the elaboration of the FATF recommendations. They were driven through by reference to a CND resolution which had already suggested these recommendations comprised the global standard: "*Recalling also Commission on Narcotic Drugs resolution 5 (XXXIX) of 24 April 1996, in which the Commission noted that the forty recommendations of the Financial Action Ask Force established by the heads of State or Government of the seven major industrialized countries and the President of the European Commission remained the standard by which the measures against money laundering adopted by concerned States should be judged …"* The subsequent paragraphs then identify a number of other activities undertaken at the regional and international levels to fight money laundering and stress the need to harmonize legislation and intensify international cooperation to effectively prevent money laundering.

The self-evaluations by States Members revealed that there was a growing compliance with the measures foreseen to fight money laundering at the global level. The implementation of the obligation to criminalize the laundering of the proceeds of drug trafficking and other serious crime improved from 72% of reporting countries over the 1998-2000 period to 92% over 2006-07. In terms of legislation on the freezing, seizure and confiscation of the proceeds of crime, implementation rose from 71% to 89%. Regarding the requirement to have money-laundering as an extraditable offence, the implementation rate increased from 65% to 77%. The obligation for States to require a declaration for cross-border transportation of cash rose from 49% to 83%, and for negotiable bearer instruments from 31% to 62%. Moreover, the implementation of measures to prevent and detect money laundering in the financial system improved from 55% to 82%.[230] Taking all of these components together, data suggest that the overall implementation rate of the measures foreseen to counter money laundering improved from 61% in 1998-2000 to 83% in 2006-07.

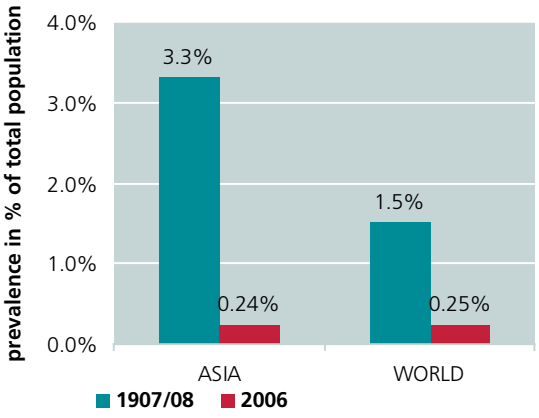
2.5 Achievements and unintended consequences of the international drug control system

Despite many twists and turns, the history of international drug control elaborated above tells a relatively simple story. At the turn of the previous century, the world faced unregulated transnational markets in highly addictive substances. Free trade in drugs resulted in the greatest drug problem the world has ever confronted: the Chinese opium epidemic. Unilateral efforts to address this problem failed, and it was not until international pressure brought the drug producing nations to the negotiating table that a solution was found. By mid century, the licit trade in narcotics had been brought under control, a remarkable achievement given that many national economies had been as dependent on opium as the addicts themselves. Illicit markets were an unavoidable consequence of international controls, and these have proven extremely problematic. But it is easy to forget what the world was like before these controls were in place, and what an achievement the international drug control system represents.

Among multilateral systems, the one regulating illicit drugs has a powerful characteristic: when a State Party ratifies one of the three Conventions, it becomes obliged to bring its national laws in line with international law. Of course, the drug problems that confront the world are diverse, and standardised laws may not be optimal for addressing the individual needs of each country. But uniformity is absolutely essential to protect the multilateral system from its biggest vulnerability: a unilateral action by a single State Party can compromise the integrity of the entire system.

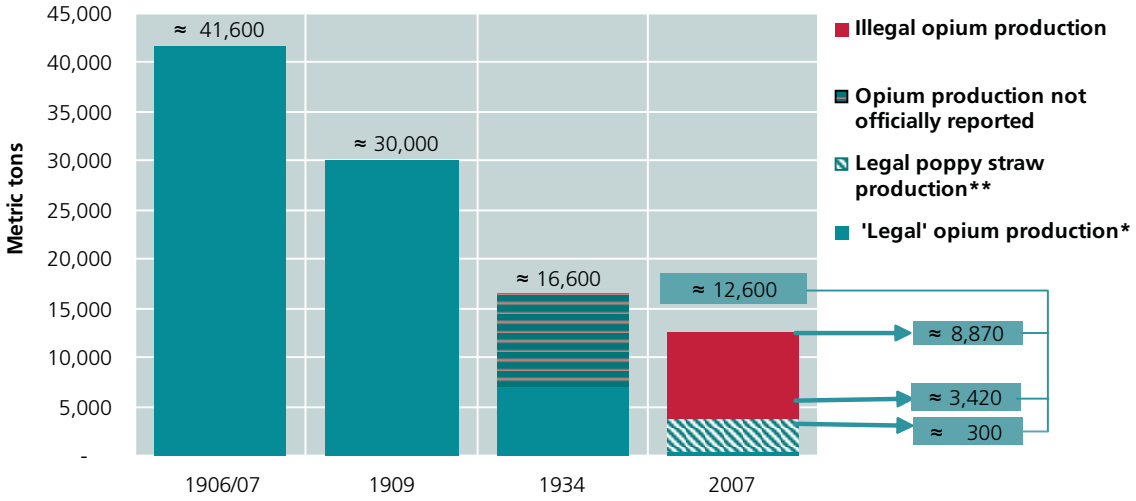
Today, there is a higher level of international consensus in this field than ever before. The pace of normative development that the international community experienced between 1961 and 1988 could not have been so rapid otherwise. Adherence to the conventions is now virtually universal. Ninety six percent of all countries (186 countries) are State Parties to the Single Convention on Narcotic Drugs of 1961. Ninety four percent (183 countries) are State Parties to the 1971 Convention

Fig. 24: Estimates of annual prevalence of opiate use, 1907/08 and 2006



Sources: UNODC calculations based on International Opium Commission, Shanghai, February 1909, UNODC, *World Drug Report 2008.*

Fig. 25: Global licit and illicit opium production, 1906/07 – 2007



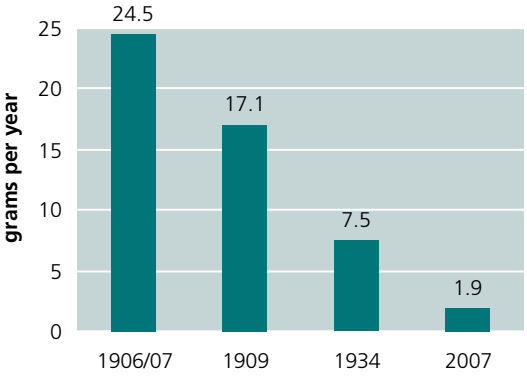
* Legal status of opium before 1912 must be differentiated from opium after 1964 (when Single Convention came into force)
** converted into opium equivalents
Sources: International Opium Commission, Shanghai, INCB, UNODC.

on Psychotropic Substances. About the same number (182 countries) are State Parties to the 1988 Convention. These are among the highest rates of adherence to any of the United Nations multilateral instruments.

There is no way to tell what the world would have been like in the absence of this control system, if issues like the Chinese opium problem had been left to progress unaddressed. If opiate use prevalence had remained the same as in the early years of the 20th century, the world would be facing some 90 million opiate users, rather than the 17 million it must care for today. Based on the latest estimates, less than 5% of the global population aged 15-64 dabbles with illicit drugs at least once each year, and only an estimated 0.6% of the planet's adult population are problem drug users. While the world is too complicated to attribute this containment exclusively to the process described above, there can be little doubt that the world is better equipped to deal with transnational drug problems due to the labours of the men and women who fought for so long to achieve global consensus on these issues.

Comparing the situation in 1906/07 with the situation in 2007 shows a clear net improvement with regard to the most dangerous class of drugs: the opiates. Global opium production (licit and illicit) declined by 78%, despite the massive increases of illicit opium production in Afghanistan over the last three decades. Including the production of poppy straw used for the manufacture of morphine, the decline still amounted to 70% over the 1906/07-2007 period. This is even more impressive if one takes into account that over the same period, the global population quadrupled, from 1.7 billion to 6.7 billion. While global production of opiates, expressed in opium equivalents, amounted to on average 24.5 grams per capita per year in 1906/07, it declined to 7.5 grams in 1934 and less than 1.9 grams by 2007. Thus data indicate that the harm related to abuse of opiates – which is still substantial – could have been some 13 times larger if the per capita production levels of the peak year of 1906/07 had been maintained over the subsequent century. Thus, with regard to the key drug group for which the international drug control systemwas created, major achievements can be seen.

Fig. 26: Global per capita production of opiates* (grams per year), 1906/07 - 2007



* Licit and illicit opium, morphine and heroin and poppy straw, transformed into opium equivalents, on a per capita basis
Sources: International Opium Commission, Shanghai, INCB, UNODC, United Nations.

Fig. 27: Global opium consumption 1907/08* and 2006

	1907-1908					2006 or latest year available				
	Population in mio	Opium users	in % of total population	Per capita consumption (grams per year)	Estimates of opiates available for local consumption in mt	Population in million	Potential No. of users today assuming unchanged prevalence rates	Latest current estimate of opiate users	in % of total population	Year of estimate
Singapore**	0.26	43,300	16.4%	325.0	55.8	4.38	718,700	160	0.004%	2006
Macao / Macao SAR of China	0.10	8,430	8.4%	148.0	14.8	0.48	40,300	4,100	0.87%	2003
Hong Kong / Hong Kong SAR of China	0.33	26,200	8.1%	142.0	46.0	7.13	575,000	10,400	0.15%	2006
China	400.00	21,529,699	5.4%	74.0	26,690.5	1,320.86	71,094,300	2,348,800	0.18%	2005
Formosa / Taiwan Prov. of China	3.04	113,165	3.7%	46.0	na	22.88	851,000	32,900	0.14%	2005
Persia / Iran	10.36	302,400	2.9%	15.0	151.0	70.27	2,051,100	1,333,300	1.90%	1999
Indochina (Vietnam, Laos, Cambodia)	14.65	250,000	1.7%	14.0	200.0	106.16	1,812,100	179,100	0.17%	2006
Siam / Thailand	7.20	110,000	1.5%	15.0	88.0	63.44	969,300	26,900	0.04%	2006
Burma / Myanmar	10.50	160,000	1.5%	6.6	69.7	48.38	737,200	130,900	0.27%	2007
Dutch East Indies / Indonesia	45.40	660,500	1.5%	3.9	raw 90.9; chandu 38	228.86	3,329,600	242,900	0.11%	2005
Philippines	7.64	63,400	0.8%	10.0	77.1	86.26	716,300	25,000	0.03%	2005
India	221.50	830,500	0.4%	1.9	422.3	1,151.75	4,318,400	3,091,200	0.27%	2001
Canada	6.10	24,200	0.4%	5.1	31.3	32.58	129,300	75,700	0.23%	2005
USA	87.01	206,000	0.2%	2.3	201.5	302.84	717,000	1,184,700	0.39%	2000
SUB-TOTAL	**814.08**	**24,327,800**	**3.0%**	**38.5**		**3,446.28**	**88,059,600**	**8,686,060**	**0.25%**	
Other countries	885.92	885,900	*** 0.1%	1.3		3,162.96	3,163,000	7,853,900	0.25%	
GLOBAL	**1,700.00**	**25,213,700**	**1.5%**	**19.1**		**6,609.24**	**91,222,600**	**16,540,000**	**0.25%**	
			Total consumption 1907/08 (average)			Potential total consumption, assuming unchanged per capita consumption data		Total consumption 2006/2007 (average)		
Total consumption of opiates (in mt of opium equivalents)			**32,500**			**114,000**		**< 12,600 ≈ 9,500**		

* estimates based on production and aferage consumption per opium user, **2006 data from Singapore are registry data and and thus not directly comparably with data from other countries, *** UNODC estimate [0.I 90 (Col. 3)]
Sources: UNODC calculations based on International Opium Comission, Shanghai, February 1909.

This is not to say that the struggle is over. Technology and adaptive markets have generated new problems as quickly as old ones are dispatched. Cocaine was first synthesised only in 1860 and was marketed aggressively before international controls took effect, so it is no surprise its use has grown in the last century. There are also several new synthetic drugs on the market which did not exist a century ago, and their use is widespread. But the consumption and availability opiates, the single class of drug that caused humanity the most trouble and which continues to account for the bulk of treatment demand and most of the drug-related deaths worldwide, has been significantly reduced.

Global production of cocaine, the amphetamines and ecstasy have all stabilized during the past half dozen years. Cannabis production increased strongly until 2004 but is currently stabilising. Opium production has shown a steady downward trend in the Golden Triangle for almost a decade. The increase of opium production in Afghanistan is extremely problematic, but even in this case there could be the first signs of stabilization or even small decline in 2008. And, importantly, the massive increases of opium cultivation in the south of Afghanistan have not occurred parallel to an increase in global demand for opiates.

When it comes to global demand, the situation is more complex and harder to measure. Most countries – even a century after international drug control began – still lack reliable monitoring systems to estimate the extent of demand, or track changes in it over time. For countries that do have systems to monitor demand, the reported trends are encouraging. This is particularly the case for North America, which has had major achievements in stabilizing and/or reducing drug consumption over the last two decades – especially among the most vulnerable cohorts (age 14-20). The situation for Europe is mixed, with major achievements in stabilizing or reducing opiate consumption offset by rising levels of cocaine use. Cannabis use increased until a few years ago, but now shows some signs of stabilization or reduction in countries that had high levels of use, though it continues to increase in countries with lower prevalence rates. A similar pattern appears for the ATS.

Unfortunately, demand seems to be increasing slightly in developing regions, which is a product of these countries accessing more of everything the global market has to offer. This is the case for South America and Africa when it comes to cannabis and cocaine. It is also the case for South-West Asia and Central Asia as well as East and Southern Africa when it comes to heroin. Supply increases in Afghanistan seem to have been primarily responsible for this. In contrast, countries in South-East Asia generally report a downward trend in opiate abuse, which follows the massive production decline in the Golden Triangle over the last decade. In the case of ATS, the trend is mixed and harder to quantify. The problem is most acute in South-East Asia. Some reports indicate a general increase over the last few years, while others point to a stable or declining trend.

The trends described above have also shown that UNGASS goals have not been entirely achieved, and there is a consequent need to 'finish the job' on heroin and cocaine, a job which the international community began a century ago and to which the international community re-committed itself in 1998. The *Political Declaration* adopted at UNGASS committed States Members: "*…to developing strategies with a view to eliminating or reducing significantly the illicit cultivation of the coca bush, the cannabis plant and the opium poppy by the year 2008*."

This objective has not yet been achieved. It is still distant, but the international community is further on the path, at least with coca and opium, than it was in 1998. The overwhelming majority of the world's illicit opium production (92%) has been contained to a single country, Afghanistan. In that country, the lion's share is grown in a handful of provinces. While one cannot deny the difficulty of stabilising Afghanistan, solving most of the world's opium supply problem today means addressing production in just five provinces of a single country, a country where drug production is tied to political instability.

For the coca bush, cultivation was reduced by 18% between 2000 and 2007, and is confined to just three countries, which was not the case in the days when the international market was unregulated. About half of world coca cultivation happens in one country, Colombia, in which cultivation dropped by nearly 40% between 2000 and 2007. As in Afghanistan, most of the production is taking place in areas affected by insurgency, so addressing drug production is linked to attaining political stability in these vulnerable countries.

With cannabis, the UNGASS objective is more difficult to assess, because the problem is even less well quantified than the other illicit drug markets. Cannabis can be grown with minimal effort almost anywhere, so it is impossible to contain to a set number of countries and monitor in a way similar to the opiates and the coca bush. In addition, public and official opinion is confused about cannabis. In the Single Convention, the drug is treated the same as cocaine and the opiates. At national level, this is seldom the case, and many countries vacillate in the degree of control they exercise over cannabis. Cannabis-related policies may change in a single country over time as political power changes hands, a problem generally not experienced with other sorts of drugs. As a consequence, cannabis remains the most widely produced and the most openly used illicit drug in the world.

With the ATS, the international community has moved further since UNGASS, with production and consumption appearing to be stable since 2000, although, as with the other drugs, the data are less clear in the developing world. Supply control methods, tried and tested with the botanical drugs, do not work well with the ATS because there is no botanical raw material to target, and no geographical distance between areas of production and of consumption. Precursor control is the only effective way of controlling ATS supply. There is doubtless progress here, but the threat of displacement continues to offset the gains of a control regime that is less than two decades old.

Despite the caveats noted above, there is enough evidence to show that the drug problem has been contained. Containment of a problem is not, of course, the same thing as its solution. The drug problem is still with us. The fundamental objective of the Conventions – restricting the use of psychoactive substances under international control to medical and scientific use – has not yet been achieved. Some of the more ambitious targets set at UNGASS in 1998 remain elusive. In addition, looking back over the last century, one can see that the control system and its application have had several unintended consequences.

The *first* unintended consequence is the creation of a criminal black market. There is no shortage of criminals interested in competing in a market in which hundredfold increases in price from production to retail are not uncommon.

The *second* unintended consequence is what one might call "policy displacement". The expanding criminal black market demands a commensurate law enforcement response, requiring more resources. But resources are finite. Public health, which is the driving concern behind drug control, also needs resources, and may have been forced to take the back seat in the past.

The *third* unintended consequence is geographical displacement. It is often called the balloon effect because squeezing (by tighter controls) in one place produces a swelling (namely, an increase) in another place, though the net effect may be an overall reduction. Success in controlling the supply of illicit opium in China in the middle of the 20th century, for example, displaced the problem to the Golden Triangle. Later successes in Thailand displaced the problem to Myanmar. A similar process unfolded in South West Asia from the 1970s onward. Supply control successes in Turkey, Iran and Pakistan eventually displaced the problem to Afghanistan. Cocaine production trends in the Andean countries show a similar dynamic: as supply was reduced in Peru and Bolivia, in the second half of the 1990s it displaced to Colombia.

The *fourth* unintended consequence is what one might call substance displacement. If the use of one drug was controlled, by reducing either supply or demand, suppliers and users moved on to another drug with similar psychoactive effects, but less stringent controls. For example, cocaine is easier to control than the amphetamines: with the former, there is a considerable geographical distance between the raw material (the coca bush in the Andean countries) and the consumer (in North America or Europe). The latter can actually be produced in the user's neighbourhood or, literally, in his kitchen. So it is with the retail market: cocaine has to be bought from a street dealer, while various forms of ATS (ATS) can be bought online from an internet pharmacy. The increasing popularity of synthetic drugs over the last few decades can be better understood in this light. Substance displacement can, of course, also move in the opposite direction. In the past couple of years, cocaine has been displacing amphetamine in Europe because of greater availability and higher status. Substance displacement also happens with precursor chemicals, where the same kinds of dynamics apply.

The *fifth* unintended consequence is the way the authorities perceive and deal with the users of illicit drugs. A system appears to have been created in which those who fall into the web of addiction find themselves excluded and marginalized from the social mainstream, tainted with a moral stigma, and often unable to find treatment even when motivated to seek it.

These unintended consequences constitute some of the international community's most challenging problems. In order to address them, the multilateral system needs to be re-invigorated and, in a sense, modernized. The three currently valid drug conventions were developed over three decades, from the 1960s to the 1980s. The foundation of the whole system is the 1961 Convention: it came into effect in 1964, nearly half a century ago. The authority of the nation state has diminished and today the term *international* covers much more than just the multi-state system. Globalization of commerce, finance, information, travel, communications, and all kinds of services and consumer patterns accelerates daily. These changed circumstances will therefore have to be considered in answering any question about implementation of the international drug control system in the 21st century.

Building on the recent past, forward progress is possible if at least three objectives are advanced:

- the basic principles must be reaffirmed;
- the performance of the drug control system must be improved;
- the unintended consequences must be confronted, contained, and addressed.

Public health, the first principle of drug control, has

receded from that position, over-shadowed by the concern with public security. Probably the most important reason why public health has receded back-stage is that the power of the international conventions has not always been harnessed to give it unequivocal support. This is because the Single Convention left the issues surrounding the demand for narcotic drugs to individual States to deal with in their own specific cultural contexts, an approach that was reasonable at the time. The Single Convention was formulated at the height of the era of decolonization and new states were being built. The membership of the UN more than doubled from 60 States Members in 1950 to 127 in 1970. This sensitivity to cultural context is not surprising. There was also a scientific reason for not detailing provisions on the treatment of drug addicts in the 1961 Convention: to allow for the possibility of scientific and medical progress. Finally, many of the modern public health challenges of drug abuse were not yet manifest when the early Conventions were drafted. The HIV virus and the Hepatitis C virus were both identified in the 1980s, after the 1961 and the 1971 Conventions were drawn up and came into effect.

The unintended consequence of all this was that demand for illicit drugs and related public health issues did not get the international focus and attention they would have if they had been detailed in the Single Convention. If the treatment of public health issues had been more specific, national institutions advocating prevention and treatment would have gained more legitimacy and resources. States did, of course, deal with public health in their own contexts, but there was little sense of the international community moving in one direction. The need for international cooperation was consequently less apparent. The international community had to wait until 1998 and the *Guiding Principles of Demand Reduction* before a clear global agenda was described. Powerful as these *Guiding Principles* may be, adherence to them is less stringent than it is to an international convention. While the need for a balanced approach was recognised at least as far back as the International Conference on Drug Abuse and Illicit Trafficking (June 1987), the emphasis on law enforcement to the detriment of public heath remains an issue to be addressed.

Improving the performance of the system is about getting several things right simultaneously:

- *First*, enforce the laws;
- *Secondly*, prevent the behaviour (drug use);
- *Thirdly*, treat and rehabilitate those who are neither deterred (by the laws) nor prevented (by prevention education) from entering into drug use; and
- *Fourthly*, mitigate the negative consequences of drugs, for both the addicts and society at large – including the countries caught in the crossfire of drug trafficking and related crimes.

None of these four things is revolutionary, all of them have been suggested before. What appears to have been missing, however, is appreciating the need to do them simultaneously, and the empirical evidence on which to base efforts.

With regard to undoing unintended consequences, focus should be kept on areas where there is sufficient international consensus to go forward in refining the control system and making it more 'fit for purpose'. There appear to be three areas: crime prevention, harm reduction and human rights.

There is a huge corpus of knowledge in the world, accumulated over centuries, in crime prevention and criminal justice. Since its very inception, the United Nations has been active in the development and promotion of international standards and norms for crime prevention and criminal justice. Eleven World Crime Congresses over the last half century have been instrumental is benchmarking humanity's progress towards a more humanitarian, caring and democratic way of administering justice. This knowledge and expertise must be harnessed and applied to control the criminal market for drugs. Doing this, in a multilateral framework, has become easier due to the passage of five binding legal instruments brokered by UNODC and adopted between 2000 and 2003: the UN Convention against Transnational Organized Crime, its three supplementary protocols (on Trafficking in Persons, Smuggling of Migrants and Illicit Manufacturing and Trading in Firearms), and the UN Convention against Corruption. Institutionally, the support structure for this multilateral machinery was put in better order by merging drugs and crime in the UNODC in 2002. The need to treat drug trafficking, organized crime, corruption and terrorism as linked phenomena is increasingly recognized and has moved up high on international priority concerns.

The concept of "harm reduction" is often made into an unnecessarily controversial issue as if there were a contradiction between prevention and treatment on one hand, and reducing the adverse health and social consequences of drug use on the other hand. This is a false dichotomy. These policies are complementary.

Improving the performance of the drug control system, it was noted above, requires four things simultaneously: enforcement of the laws; prevention of drug-related behaviour; treatment of those who are neither deterred or prevented from entering into illicit drug use; and mitigation of the negative consequences of drugs, both for those who are caught in the web of addiction, as well as for society at large. The last of those four is what is normally called 'harm reduction'. There cannot be anything wrong with it provided it is done along with the

other three things: enforcement, prevention and treatment. If "harm reduction" is done exclusively, namely without the other three components, it will make a mockery of any control system, send the wrong message and only perpetuate drug use.

The 1961 Single Convention put it unequivocally:

……Parties shall give special attention to and take all practicable measures for the prevention of abuse of drugs and for the early identification, treatment, education, aftercare, rehabilitation and social integration of the persons involved.

As early as 1993, the International Narcotics Control Board pronounced that harm reduction programs can be part of a comprehensive demand reduction strategy, but they should not be carried out at the expense of – or considered substitutes for other important policies (such as prevention) to reduce the demand for illicit drugs. Yet, for all of this clarity, an unhelpful debate has raged on, lost in the need to find certainty between the polarities of 'zero tolerance' and 'harm reduction'.

The production, trafficking and consumption of illicit drugs can only be understood properly if they are seen in their many different dimensions: the political, the social, the economic and the cultural. The drugs issue thus intersects many different domains: law, criminal justice, human rights, development, international humanitarian law, public health and the environment, to name but a few. In each of these domains, the United Nations has standards, norms, conventions and protocols. Their status varies, ranging from "soft" to "hard" law, from non-binding standards to obligatory conventions. While it is not always easy to establish a hierarchy between these different instruments, it is clear that the constituting document of the Organization, the *Charter of the United Nations*, takes priority over all other instruments. Article 103 of the Charter states:

…In the event of conflict between the obligations of the Members of the United Nations under the present Charter and their obligations under any other international agreement, their obligations under the present Charter shall prevail.

In the context of drug control, this means that the drug Conventions must be implemented in line with the obligations inscribed in the Charter. Among those obligations are the commitments of signatories to protect human rights and fundamental freedoms.

The protection of human rights is further enshrined in another foundational document of the United Nations, the *Universal Declaration of Human Rights,* which is now 60 years old. In Article 25 of the *Universal Declaration*, health is listed as a basic human right. It stands to reason, then, that drug control, and the implementation of the drug Conventions, must proceed with due regard to health and human rights. The former was discussed at length above in the context of public health and the drug control system. The issue of human rights, the protection of which is a growing international movement, is now also becoming salient in the implementation of certain drug control measures. The use of the death penalty (among others for drug offences) presently divides the membership of the United Nations. The recent General Assembly moratorium on the application of capital punishment is a way forward, but the gaps between international standards and the law of individual nations need to be bridged by means of negotiation and the promotion of good practice in this difficult area.

Conclusion

The international drug control system is an extremely valuable piece of political capital, enjoying virtually universal adherence. It has succeeded in containing the illicit drug problem across the span of a whole century, as well as over the last decade. Yet it has not solved the problem it was created to resolve. The ways in which the drug control system has been implemented have had several unintended consequences: the criminal black market, policy displacement, geographical displacement, substance displacement and the marginalization of users. Moving forward into the next decade, and making the drug control system more 'fit for purpose', would appear to need a triple commitment: reaffirming the basic principles (multilateralism and the protection of public health); improving the performance of the control system (by doing enforcement, prevention, treatment and harm reduction simultaneously); and mitigating the unintended consequences.

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3. STATISTICAL ANNEX

3.1 Production

3.1.1 Afghanistan

Fact Sheet – Afghanistan Opium Survey 2007[1]

	2006	Change on 2006	2007
Net opium poppy cultivation (after eradication) in per cent of agricultural land in per cent of global cultivation	165,000 ha 3.65% 82%	+17%	193,000 ha 4.27% 82%
Number of provinces affected by poppy cultivation Number of poppy free provinces	28 6		21 13
Weighted average opium yield	37.0 kg/ha	+15%	42.5 kg/ha
Potential production of opium in per cent of global production	6,100 mt 92%	+34%	8,200 mt 92%
Average annual farm-gate price of dry opium	US$ 140/kg	-21%	US$ 111/kg
Current Afghanistan GDP[2] Total farm-gate value of opium production in per cent of GDP[3]	US$ 6.9 billion US$ 0.76 billion 11%	+12% +32%	US$ 7.5 billion US$ 1 billion 13%
Total export value of opiates to neighbouring countries in per cent of GDP[4]	US$ 3.1 billion 45%	+29%	US$ 4.0 billion 53%
Number of households involved in opium cultivation Number of persons involved in opium cultivation in per cent of total population (23 million)[5]	448,000 2.9 million 12.6%	+14% +14%	509,000 3.3 million 14.3%
Household average yearly gross income from opium of opium poppy growing families	US$ 1,700	+16%	US$ 1,965
Per capita average yearly gross income from opium in opium poppy growing families	US$ 260	+17%	US$ 303
Current Afghanistan GDP per capita[6]	US$ 290	+7%	US$ 310
Indicative gross income from opium per ha Indicative gross income from wheat per ha	US$ 4,600 US$ 530	+13% +3%	US$ 5,200 US$ 546
Eradication	15,300 ha	+24%	19,047 ha

1 The information in this section comes from the Afghanistan Opium Survey 2007 (UNODC/Ministry of Counter Narcotics, Afghanistan, October 2007). The full report can be found at (http://www.unodc.org/unodc/en/crop-monitoring/index.html).

2 Data for Afghan year 1384 (March 2005 - March 2006) and preliminary estimates for Afghan year 1385 (March 2006 - March 2007) (Afghan Government, Central Statistical Office).

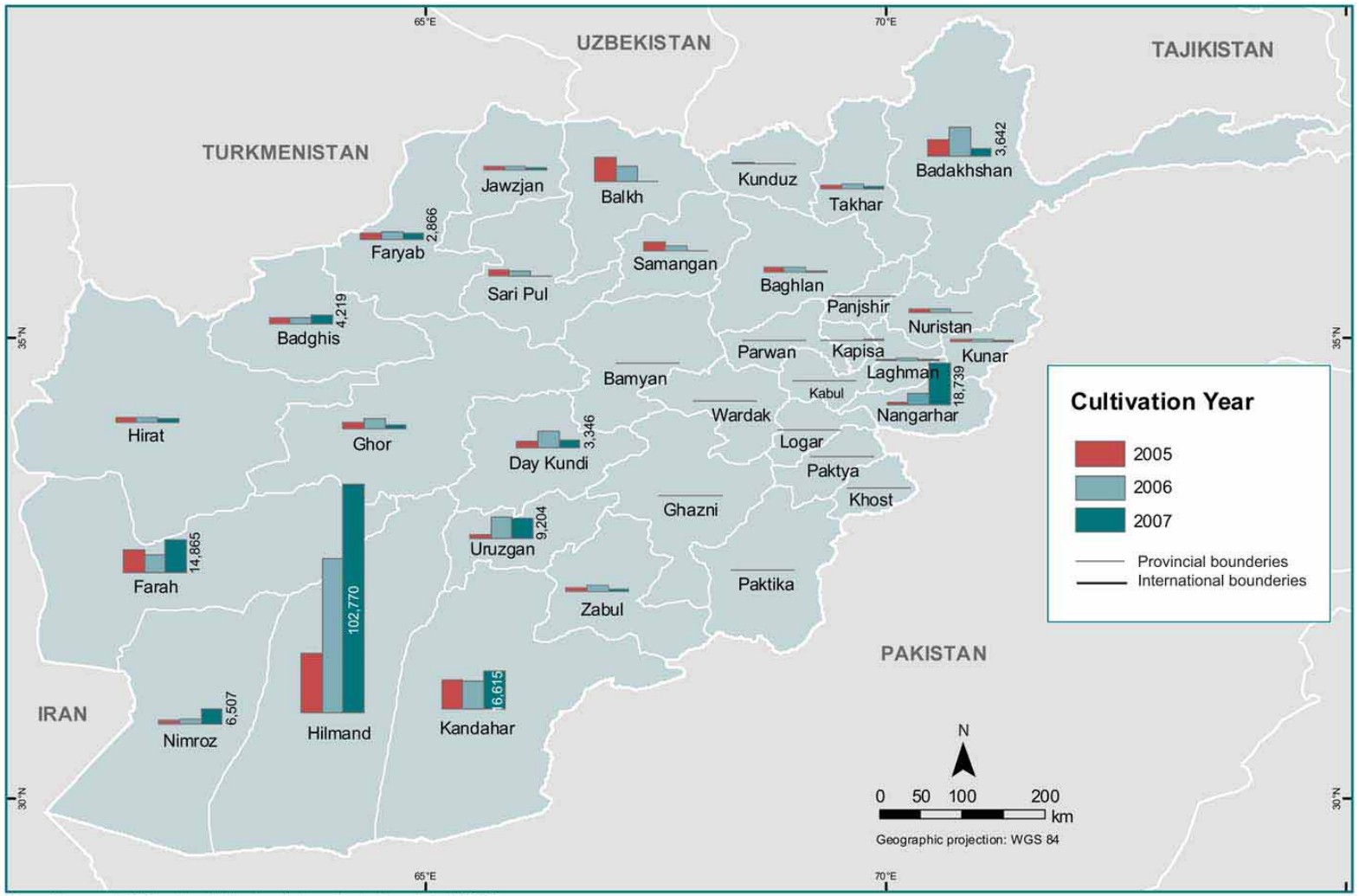
3 Based on weighted average farm-gate price of dry opium at harvest time(US$ 122/kg in 2007, US$ 125/kg in 2006) and Afghan Govt. GDP estimates. Based on IMF GDP projections: farm-gate value: 9% of GDP in 2006; 10% in 2007.

4 Based on Afghan Govt. GDP estimates. Using IMF GDP projection the percentage of the opiate sector would be: 37% of GDP in 2006; 40% in 2007.

5 Population based on estimates by the Afghan Central Statistical Office (22.2 million in 2003).

6 Afghan Govt. estimates; IMF projections: current GDP per capita: US$ 335 in 2006 and US$ 383 in 2007.

Opium poppy cultivation in Afghanistan, 2005-2007



Source: Government of Afghanistan - National monitoring system implemented by UNODC
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Cultivation and eradication

The area under opium poppy cultivation in Afghanistan increased 17% in 2007, with cultivation expanding to a record high of 193,000 hectares in 2007. Global opium poppy cultivation, as a result, rose 17% in 2007 to almost over 236,000 ha. Afghanistan's share of global cultivation remained 82%.

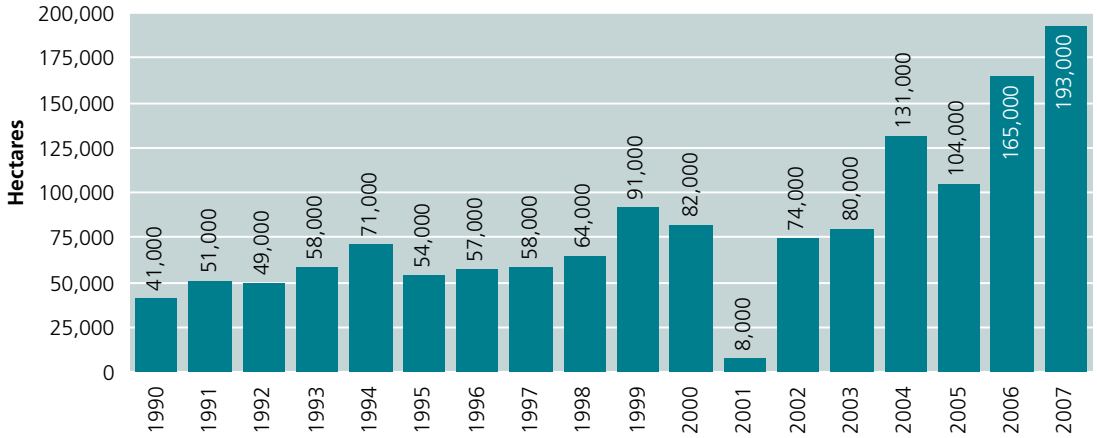
Regionally, growth was not uniform. Sharp increases occurred in the South, West and East, and significant decreases took place in the North and North-East of the country. Fifty-three per cent of total opium poppy cultivation of Afghanistan was located in the southern province of Hilmand.

The number of opium poppy free provinces rose from 6 in 2006 to 13 in 2007[7].

UNODC does not conduct a cannabis cultivation survey in Afghanistan. However, based on observations made during the annual opium survey, the area under cannabis cultivation in 2007 was estimated at about 70,000 hectares, compared to 50,000 ha one year earlier.

In 2007, total opium poppy eradication (including Governor-led and AEF-led eradication) rose to 19,047 ha. On average, 63% of cultivated poppy was left standing after eradication teams had carried out their activities, though there was considerable regional variation.

Afghanistan, opium poppy cultivation (ha), 1990 to 2007



Afghanistan, regional distribution of opium poppy cultivation (ha), 2006 to 2007

Region	2006 (ha)	2007 (ha)	Change 2006-2007	2007 as % of total
Southern	101,900	133,546	31%	69%
Northern	19,267	4,882	-75%	3%
Western	19,820	28,619	44%	15%
North-Eastern	15,336	4,853	-68%	3%
Eastern	8,312	20,581	148%	11%
Central	337	500	48%	0.3%
Rounded Total	165,000	193,000	17%	100%

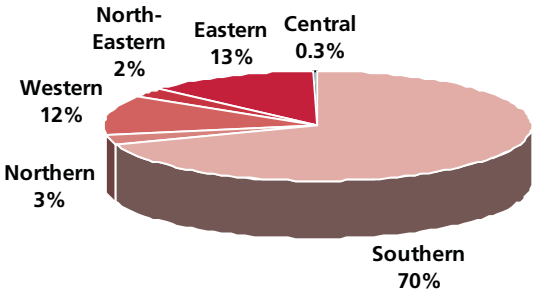
7 In 2007, provinces with less than 100 hectares opium poppy were considered to be free of poppy, while in 2006, only provinces with zero cultivation were counted as poppy-free.

Production

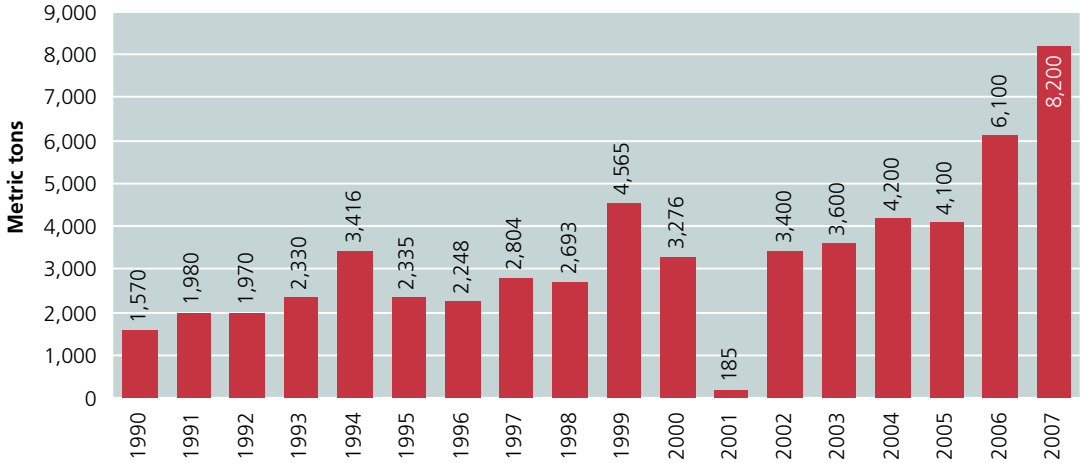
In 2007, opium production in Afghanistan reached 8,200 mt: 24% higher than *global* opium production in 2006 (6,610 mt). Record levels of cultivation and a high yield led to the 34% increase in potential opium production in 2007. Taking domestic consumption of opium, seizures and opium exports into account, Afghanistan's morphine and heroin production is estimated to have reached 666 mt in 2007, up from 555 mt in 2006.

Reaching its highest point since 1990, global opium production rose to more than 8,800 mt in 2007. The proportion of Afghanistan in global opium production remained 92%.

Afghanistan, potential opium production by region, 2007



Afghanistan, potential opium production (mt), 1990 to 2007



Prices

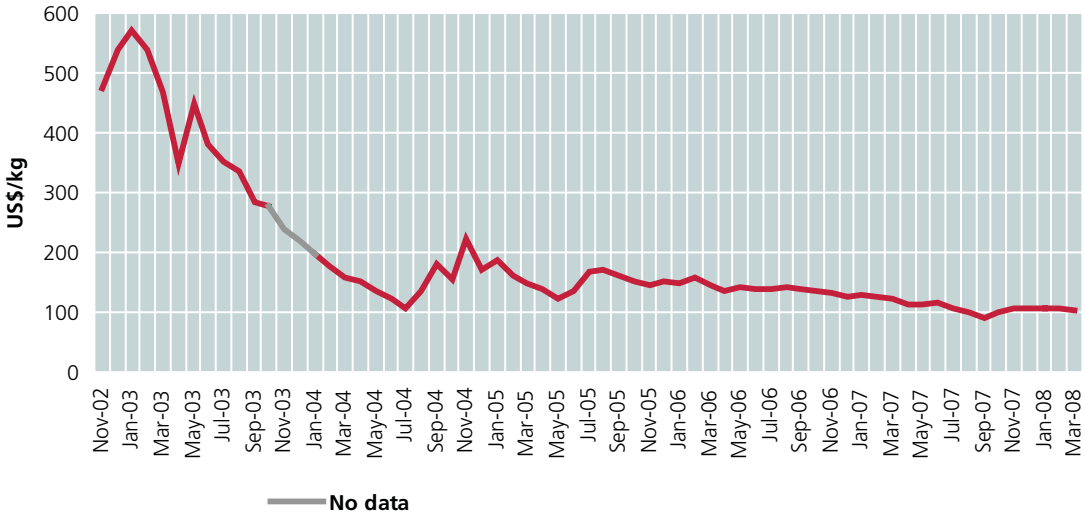
The second straight year of large production increases had a dampening effect on prices in 2007. The average annual farm-gate price for dry opium fell from US$ 140/kg in 2006 to US$ 111/kg in 2007 (-21%). In 2007 the lowest monthly farm-gate price occurred in September with US$ 91/kg. This occurred much later than in the three previous years when price falls took place closer to harvest time.

In 2007, regional price differences continued to exist but were less pronounced than in 2006. Trader prices in the Northern, Western and Southern regions remained relatively stable, while prices in the North-eastern and Eastern regions were more dynamic. Following a significant post-harvest price decrease in the Eastern region prices in the two main production regions, South and East, tended to converge in 2007. This markedly contrasts with the 2006 situation when monthly price differences exceeded US$ 100/kg. There is still some unexplained price inflation in the Southern region where prices remained close to the national average throughout the years, and, consequently, did not fall as much as would have been expected given the production increases.

Farm-gate value

Based on opium production and reported opium prices,

Afghanistan, monthly farm-gate prices of dry opium (US$/kg), November 2002 to March 2008



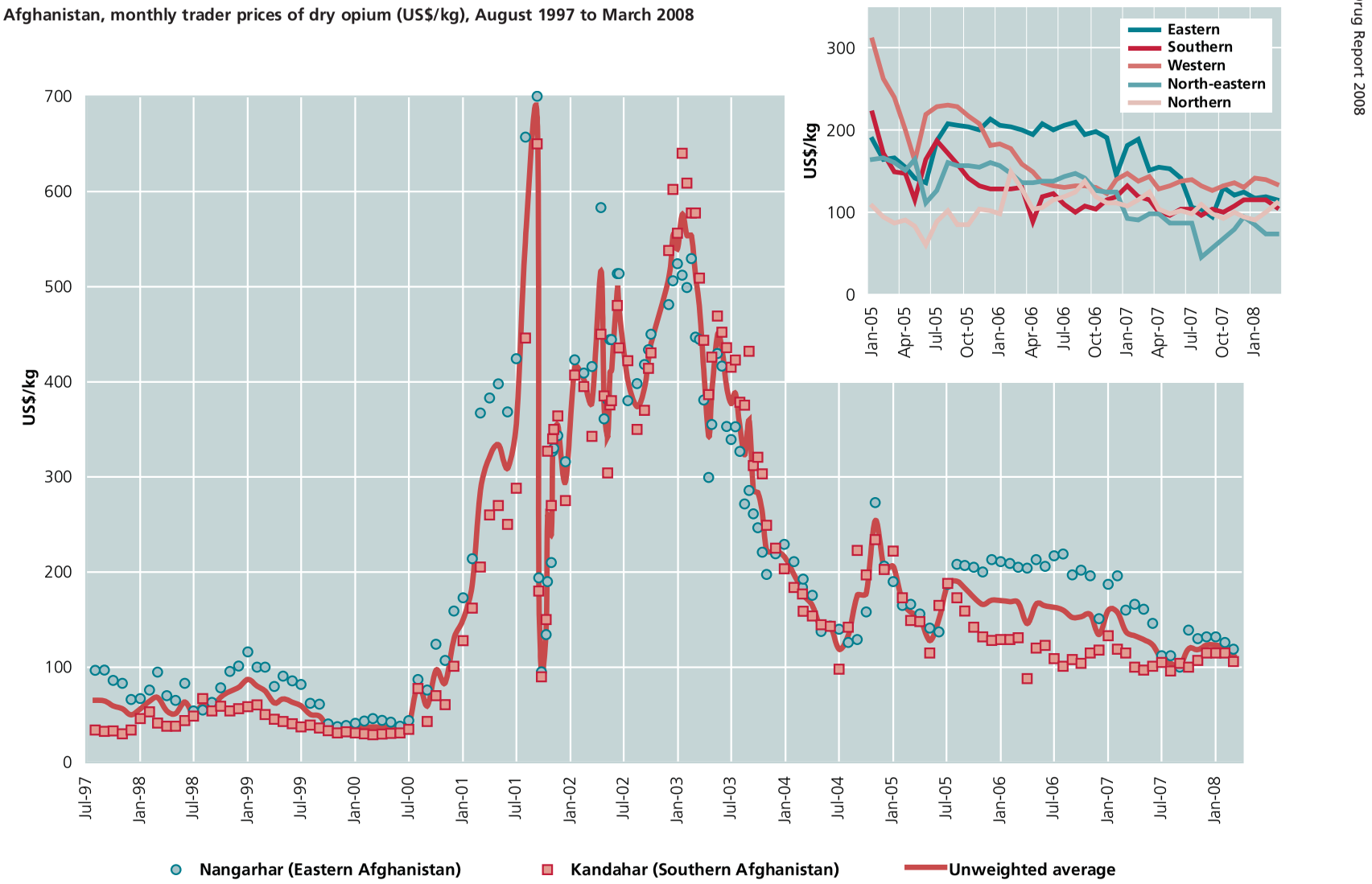
the farm-gate value of the opium harvest amounted to US$ 1 billion in 2007. Higher production and only slightly lower prices resulted in a 32% increase of the overall farm-gate value of opium production over 2006 (US$ 760 million). The farm-gate value of opium as a proportion of GDP (US$ 7.5 billion[8]) increased from 11% in 2006 to 13% in 2007. In 2007, gross income from opium accruing to farmers in Hilmand amounted to US$ 528 million - more than half of total opium-related farmer's income.

Households involved

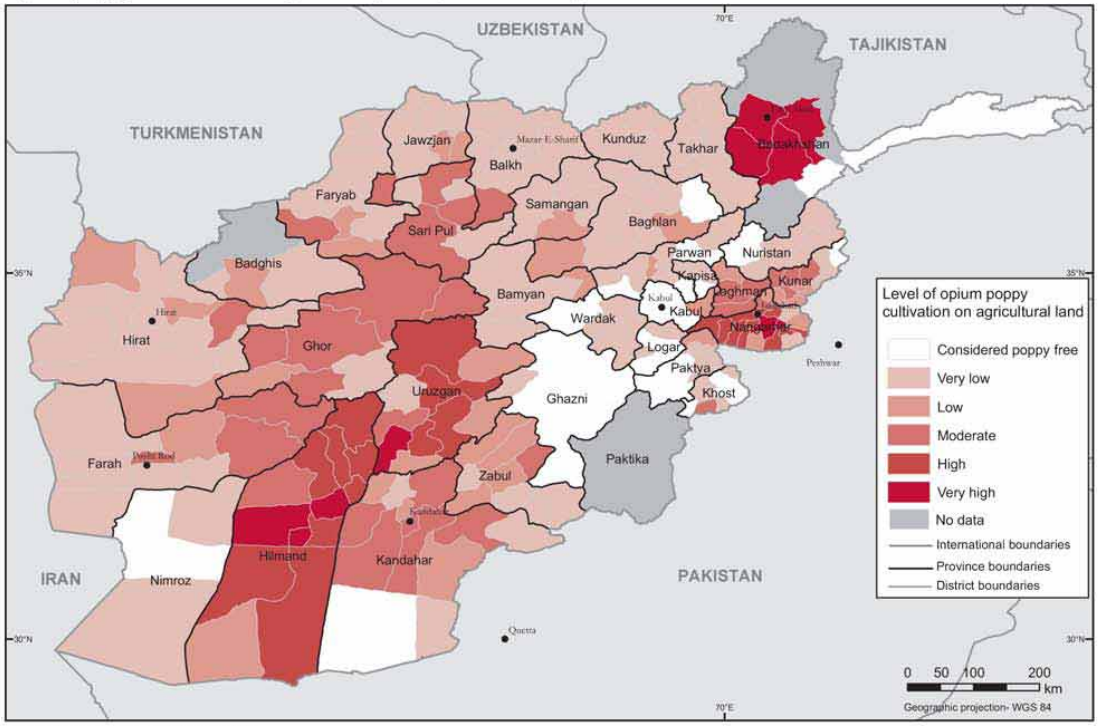
In 2007, the survey estimated that 509,000 families were involved in opium poppy cultivation compared to 448,000 families in 2006 (a 14% increase). Given an average of 6-7 members per family, this represents an estimated total of about 3.3 million persons, or 14.3 % of Afghanistan's 23 million population. The 14% increase in opium cultivating households in 2007 does not correspond directly to 'new' opium poppy growing farmers, as it includes farmers who are returning to cultivation after skipping one or more years. In the Southern and Eastern Regions, where opium poppy cultivation increased by 31% and 44% respectively, very few farmers had cultivated for the first time and many did not cultivate every year.

8 Data for Afghan year 1384 (March 2005 - March 2006) and preliminary estimates for Afghan year 1385 (March 2006 - March 2007) (Afghan Government, Central Statistical Office).

Afghanistan, monthly trader prices of dry opium (US$/kg), August 1997 to March 2008

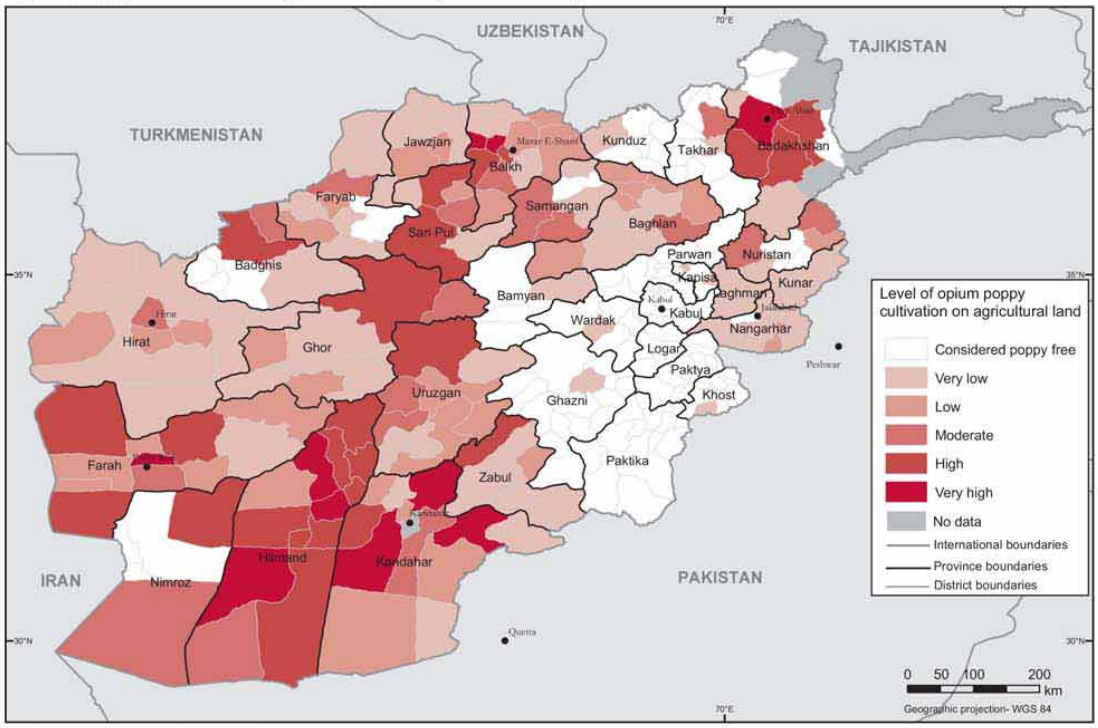


Opium poppy cultivation in Afghanistan, 2004 (at district level)



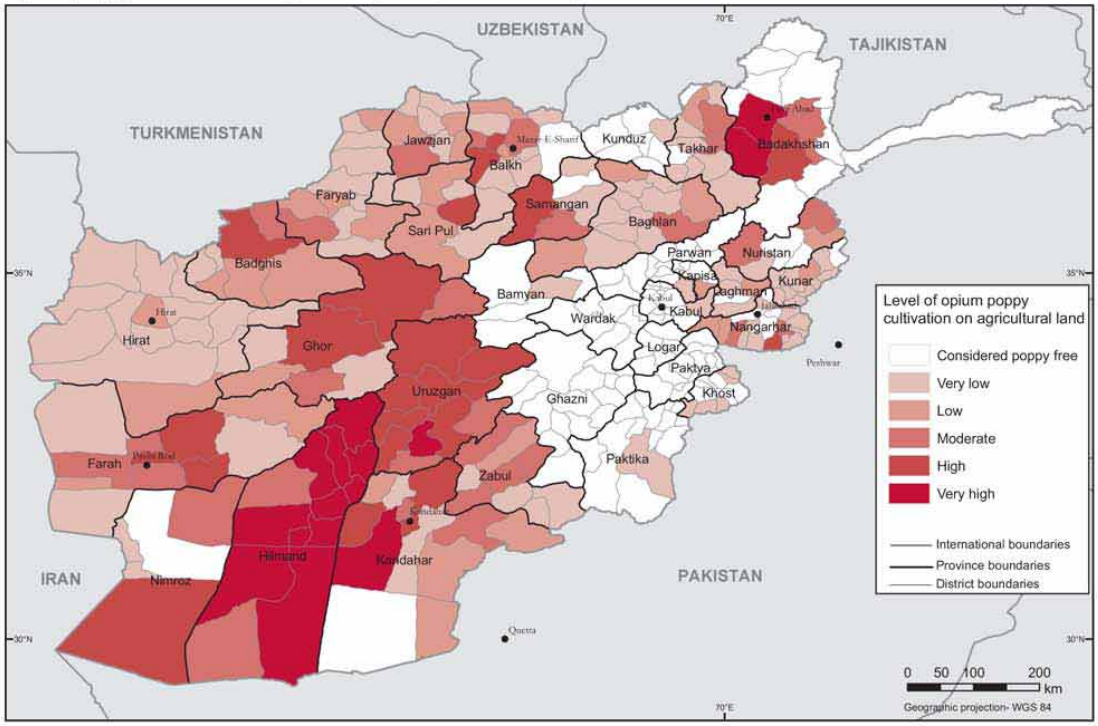
Source: MCN - UNODC Afghanistan Opium Survey 2004
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Opium poppy cultivation in Afghanistan, 2005 (at district level)



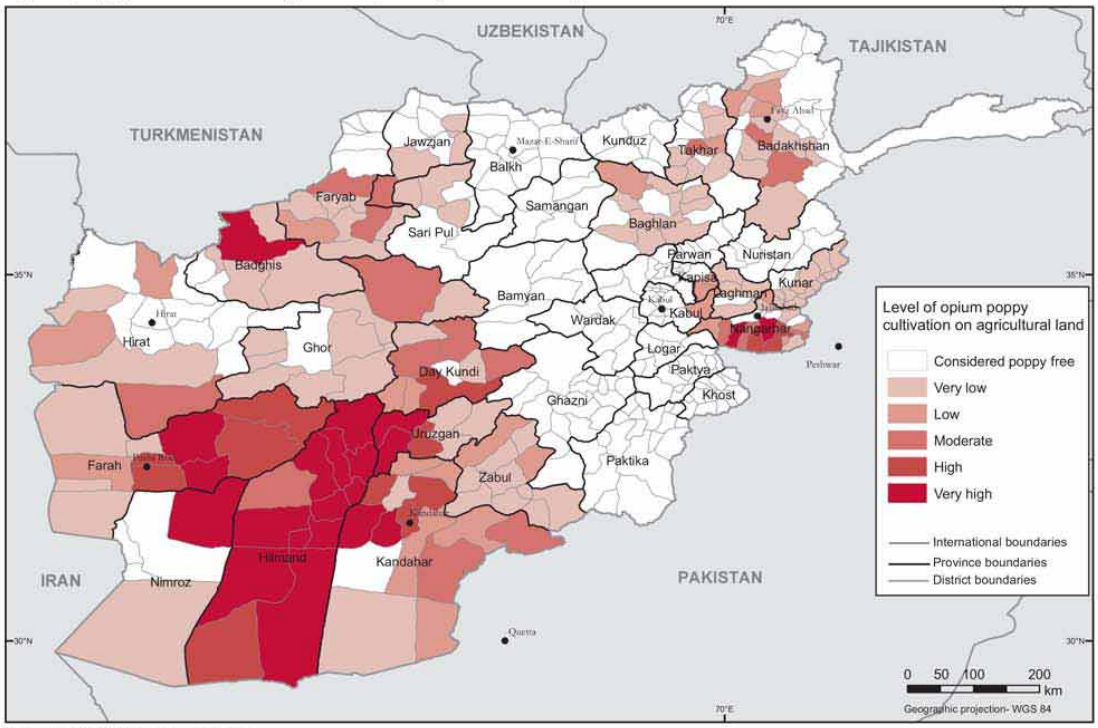
Source: MCN - UNODC Afghanistan Opium Survey 2005
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Opium poppy cultivation in Afghanistan, 2006 (at district level)



Source: MCN - UNODC Afghanistan Opium Survey 2006
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Opium poppy cultivation in Afghanistan, 2007 (at district level)



Source: MCN - UNODC Afghanistan Opium Survey 2007
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

3.1.2 Bolivia

Fact sheet – Bolivia Coca Survey 2007[1]

	2006	Change on 2006	2007
Coca cultivation	27,500 ha	+5%	28,900 ha
Of which	*18,900 ha*	*+5%*	*19,800 ha*
in the Yungas of La Paz	*8,300 ha*	*+6%*	*8,800 ha*
in Chapare	*300 ha*	*0%*	*300 ha*
in Apolo	*12,000 ha*		*12,000 ha*
Of which permitted by Bolivian law 1008			
Production of sun-dried coca leaf	48,000 mt		
Potential production of cocaine HCl	94 mt	+9%	104 mt
In per cent of the global cocaine production	10%		10%
National weighted average farm-gate price of coca leaf (outside state market)	US$ 3.9/kg	+5%	US$ 4.1/Kg
Total farm-gate value of coca leaf production	US$ 180 million	+19	US$ 214 mn
GDP[2]	US$ 8.7 billion	+4.5	US$ 9.1 mn
Farm-gate value of coca leaf production in per cent of GDP	2.0%		2.3%
Farm-gate value of coca leaf production in per cent of value of 2003 agricultural sector	13%		16%
Reported eradication of coca bush	5,070 ha	+24%	6,269 ha
Reported seizure of sun-dried coca leaves	1,364 mt	+27%	1,730 mt
Reported seizure of cocaine base	12,779 kg	+17%	14,912 kg
Reported seizure of cocaine HCl	1,309 kg	+123%	2,923 kg
Reported destruction of coca laboratories[3]	4,073	+0.3%	4,087
Of which cocaine HCl processing laboratories	*3*	*+100%*	*6*

Cultivation and eradication

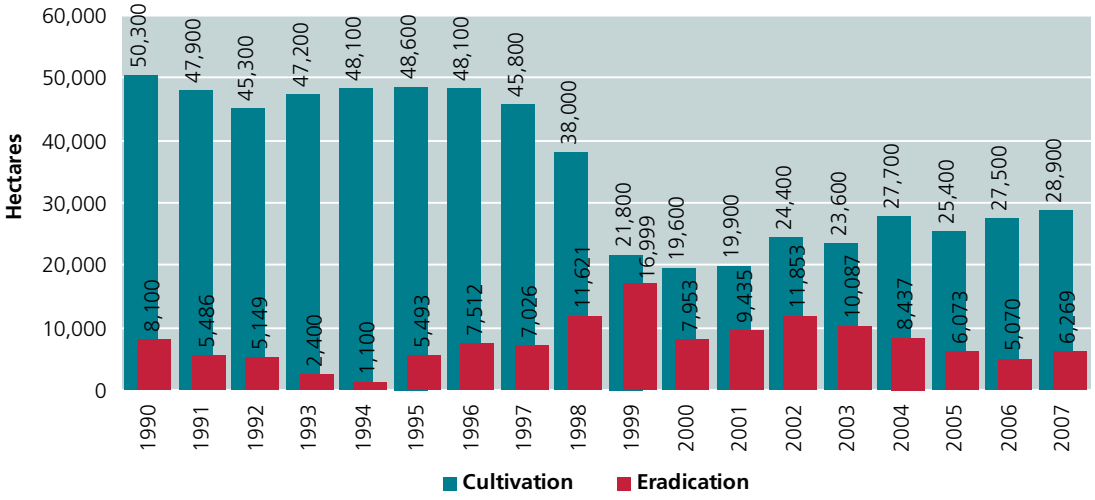
In 2007, 16% of global coca cultivation took place in Bolivia. The total area under cultivation increased by 5% in 2007 to 28,900 ha. Overall, cultivation levels remained well below the levels reached in the early and mid-1990s. Increases in area under coca cultivation in the country's two largest cultivation regions, the Yungas of La Paz and Chapare, occurred at roughly the same rate. As in 2006, 69% of the coca area was located in the Yungas of La Paz, 30% in Chapare, and only 1% in Apolo.

1 The information in this section comes from the report on Coca Cultivation in Bolivia (UNODC/Government of Bolivia, June 2008), and can also be found at www.unodc.org.

2 Source: INE 2006.

3 Excluding coca leaf maceration pits.

Bolivia, coca cultivation and eradication (hectares), 1990 to 2007

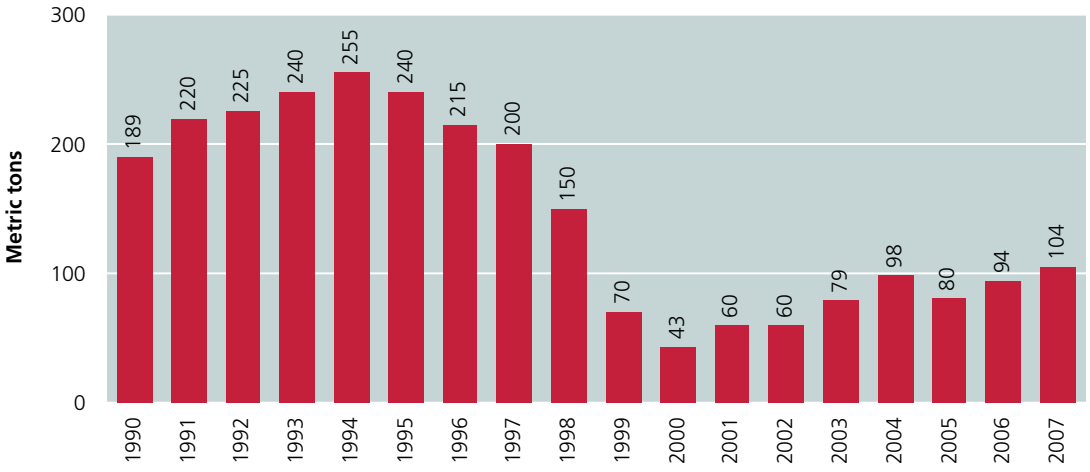


The Government of Bolivia reported 6,269 ha of eradication in 2007, an increase of 24%. This was higher than levels reached in 2005 (5,070 ha) and 2006 (6,073 ha). As in the past, most of the eradication (95%) was carried out in the Chapare region.

Production

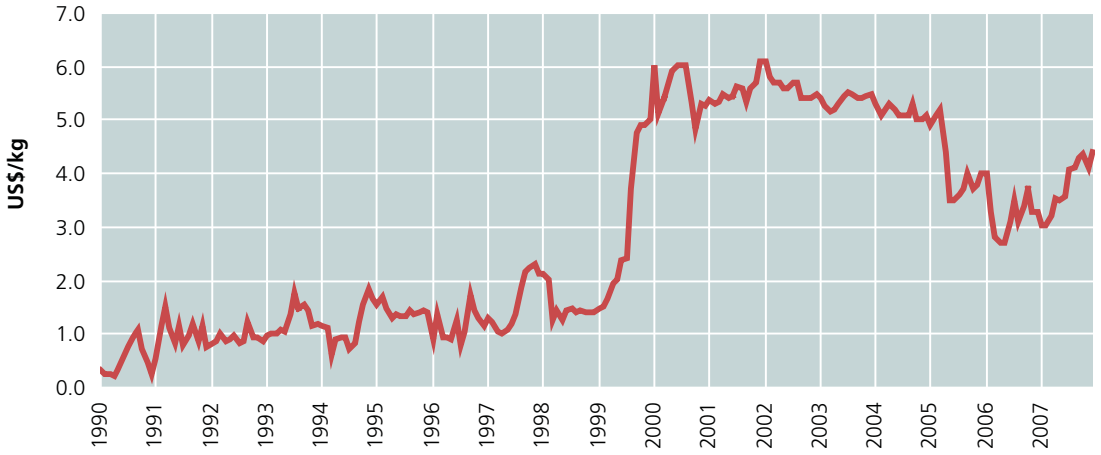
In 2007, potential cocaine production in Bolivia increased by 9 % to 104 mt. The increase in potential cocaine production is more pronounced than for the area under coca cultivation because the relatively low yielding areas where coca leaf is produced for traditional purposes have not been included.

Bolivia, potential cocaine production (metric tons), 1990 to 2007



Note: Production estimates for 2004 and 2005 were updated in 2007 based on a new UNODC study on coca leaf yield in the Yungas of la Paz.

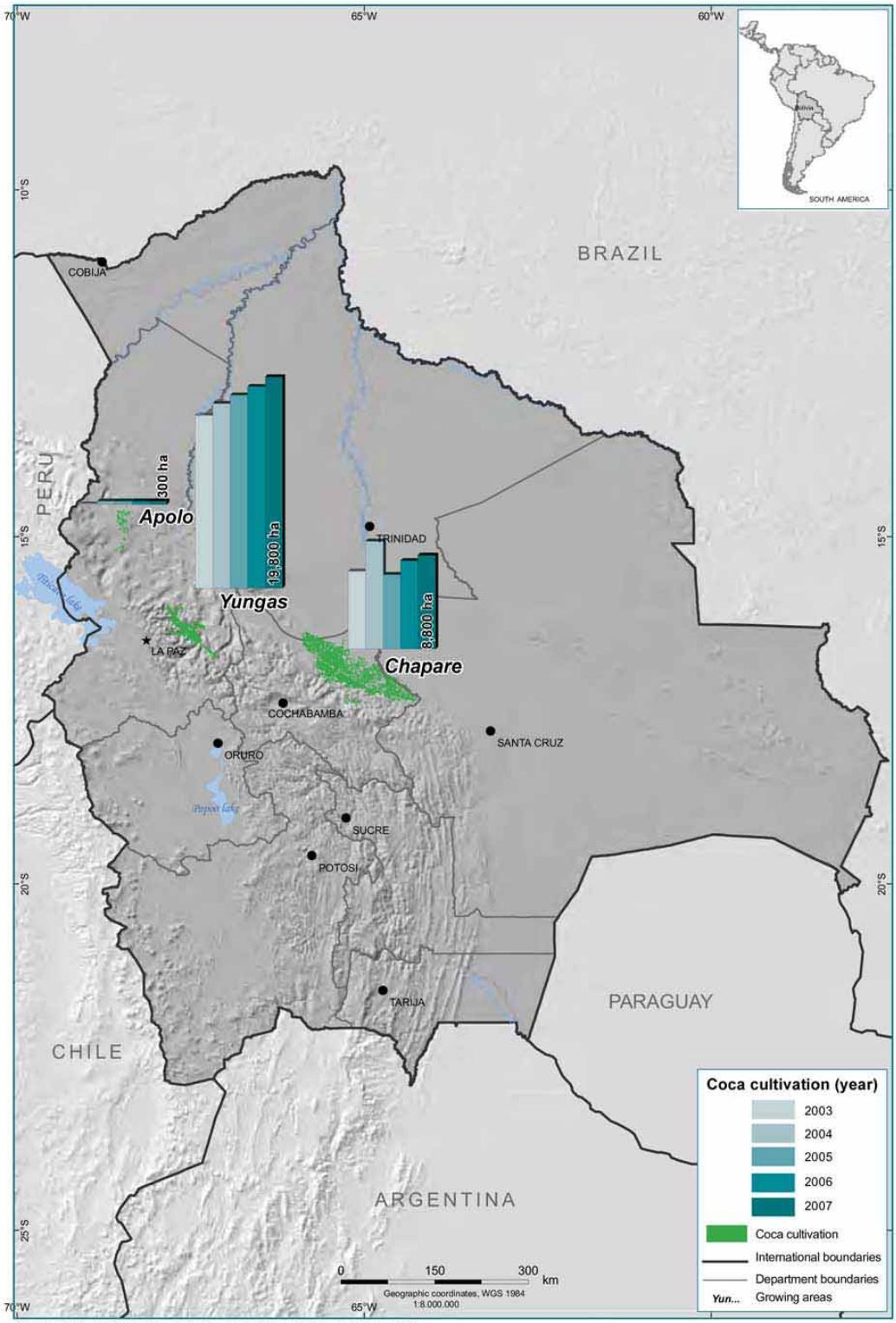
Bolivia, monthly farm-gate prices of sun-dried coca leaf in Chapare region (US$/kg), 1990 to 2007



Prices

Farm-gate prices for sun-dried coca leaf decreased, with annual averages declining from US$ 5.6/kg in 2002 to only US$ 3.2/kg in 2006 in the Chapare region. In 2007, however, after four years of decline, the annual coca leaf price increased by 16 % from US$ 3.2/kg in 2006 to US$ 3.8/kg. Prices for coca leaf in the Yungas of La Paz region, as well as in the state-controlled coca leaf markets, all showed increases of similar magnitude, indicating an increased demand for sun-dried coca leaf. Significantly higher seizures of coca leaf and derivatives in 2007 (cocaine HCl in particular) indicate that this increased demand can be attributed to trafficking.

Bolivia, coca cultivation by region, 2003-2007



Source: Government of Bolivia - National monitoring system supported by UNODC
The boundaries and names shown and the designation used on this map do not imply official endorsement or acceptance by the United Nations

3.1.3 Colombia

Fact sheet – Colombia Coca survey 2007[1]

		2006	Change on 2006	2007
Net coca cultivation (rounded total)		78,000 ha	*+27%*	*99,000 ha*
Of which	*Pacific region*	18,810 ha	*+38%*	*25,960 ha*
	Putumayo-Caquetá region	17,220 ha	*+23%*	*21,130 ha*
	Central region	12,130 ha	*+73%*	*20,950 ha*
	Meta-Guaviare region	20,540 ha	*-4%*	*19,690 ha*
	Elsewhere	9,170 ha	*+23%*	*11,170 ha*
Potential production of cocaine		610 mt	-2%	600 mt
In % of global cocaine production		62%		60%
Average farm-gate price of coca paste		US$ 879/kg	+7%	US$ 943/kg
		COP 2,070,000/kg	-5%	COP 1,959,000/kg
Average wholesale price of cocaine		US$ 1,762/kg	+25%	US$ 2,198/kg
		COP 4,155,000/kg	+10%	COP 4,567,000/kg
Total farm-gate value of the production of coca leaf and its derivatives		US$ 683 million	+37%	US$ 934 million
in per cent of GDP		0.5%		0.5%
in per cent of agricultural sector		5%		5%
Reported aerial spraying of coca bush		172,026 ha	-11%	153,134 ha
Reported manual eradication of coca bush		43,051 ha	+55%	66,805 ha
Reported seizure of cocaine		127,326 kg	-1%	126,641 kg
Reported destruction of coca processing laboratories		2,247	+5%	2,360
Of which cocaine HCl processing lab.		*202*	*+31%*	*265*
Reported opium poppy cultivation		1,023 ha	-30%	714 ha
Potential opium latex production		31 mt	+10%	34 mt
Potential heroin production (rounded)		1.3 mt	+10%	1.4 mt
Average farm-gate price of opium latex		US$ 251/kg	14%	US$ 286/kg
Average heroin price		US$ 10,103/kg	-7%	US$ 10,780/kg
Reported seizure of heroin		442 kg	+21%	537 kg

1 The information in this section comes from the report on Coca Cultivation in Colombia (UNODC/Government of Colombia, June 2008), and can also be found on the internet (http://www.unodc.org).

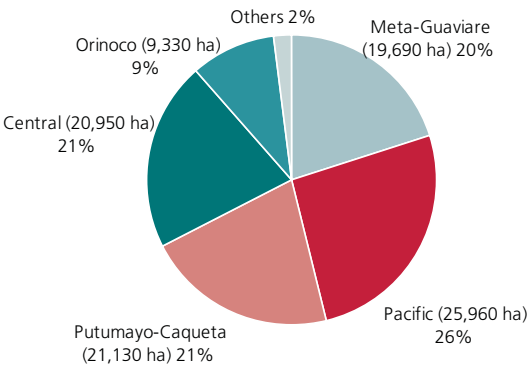
Cultivation and eradication

In 2007, cultivation in Colombia increased 27% to 99,000 ha on the strength of cultivation increases in the Pacific and Central regions.These were responsible for over three quarters of the total area increase overall. The Pacific was the largest coca region in 2007 with 25,960 ha, followed by Putumayo-Caquetá, Central and Meta-Guaviare. Together, these four regions represented 89 % of the total area under coca bush in Colombia. Putumayo-Caquetá, once by far the largest coca region, had seen a considerable decrease in area under coca cultivation between 2000 and 2004. However, since then, coca cultivation has gradually increased and, in 2007, approached the 2002 level. Meta-Guaviare, in 2001 the second largest coca region, ranked only forth in 2007, having experienced the sixth consecutive decrease in area under coca bush in six years. This decrease and other decreases in smaller cultivating regions such as Amazonia and Sierra Nevada could not offset the increase in the larger regions.

In 2007, the Colombian authorities continued to intensify manual eradication efforts, successfully eradicating 66,805 ha. Eradication by spraying also continued at high levels (153,134 ha). Both manual eradication and spraying activities were concentrated in the departments of Antioquia (Central region), Nariño (Pacific region) and Putumayo.

While opium poppy is cultivated in Colombia it remains a small cultivator in global terms. According to Government reports, the area under opium poppy cultivation continued to decline in 2007 to 714 ha.

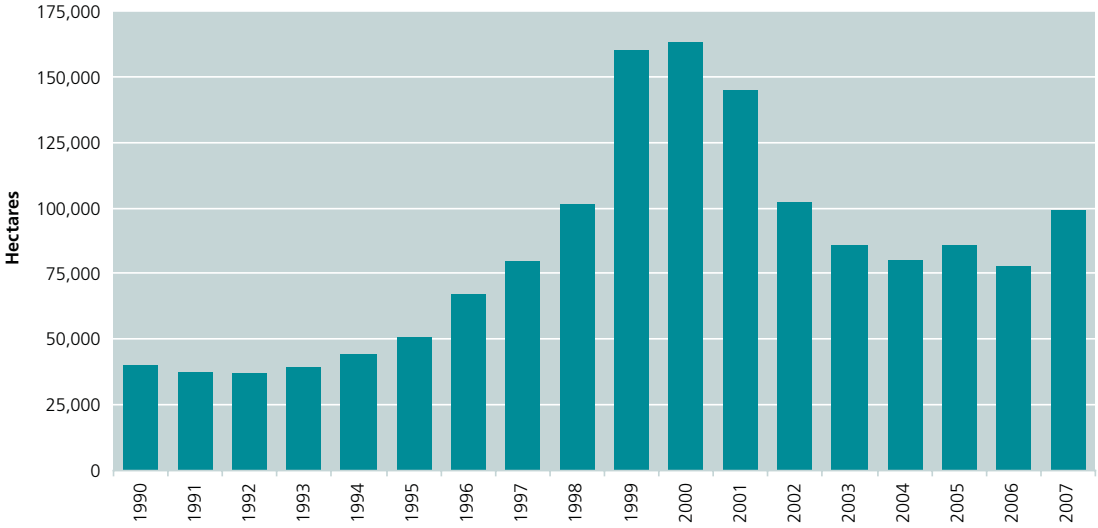
Colombia, coca cultivation by region, 2007



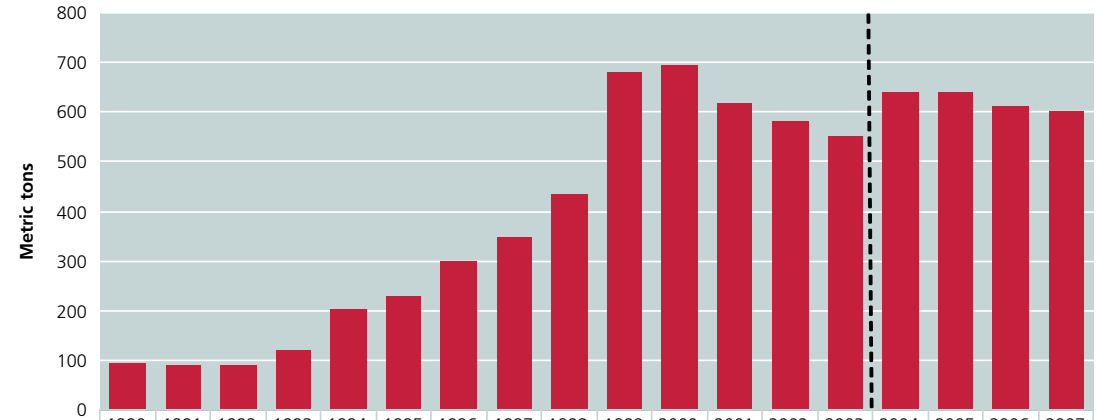
Production

Despite the significant increase in coca cultivation in 2007, the potential production of cocaine HCl in Colombia amounted to 600 mt, roughly the same level as in 2006 (610 mt). There are several possible explanations for this. First, the increase in cultivation occurred in regions with under-average coca leaf yields, while reductions took place in high yielding regions such as Meta-Guaviare. In addition, new research revealed lower coca leaf yields in the Central region, the region that contributed most to the overall increase in cultivation.

Colombia, coca cultivation (hectares), 1990 to 2007



Colombia, potential cocaine production (metric tons), 1990 to 2007



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Production	92	88	91	119	201	230	300	350	435	680	695	617	580	550	640	640	610	600

Note: Cocaine production estimates for 2004 and later are not directly comparable with previous years.

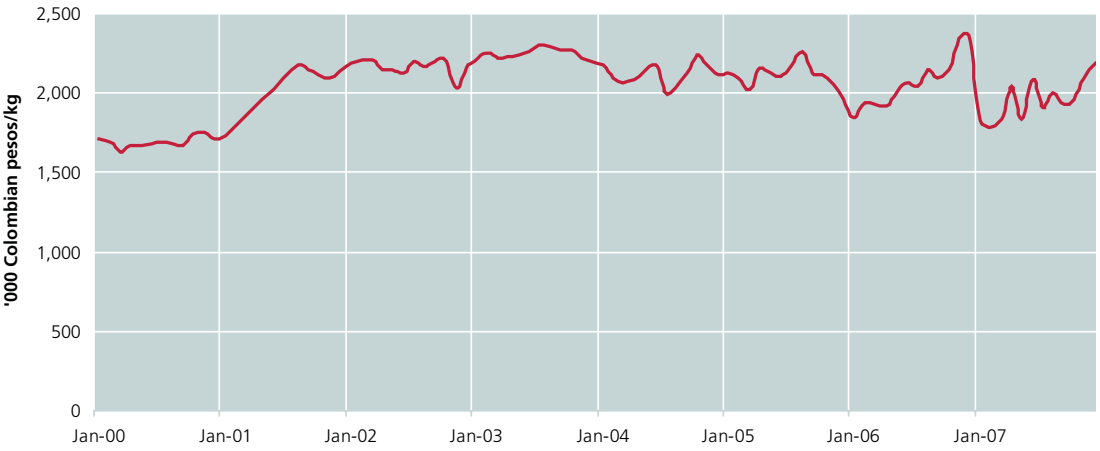
Prices for coca leaf, cocaine and opium

In 2007, the average price for coca paste at the farm-gate decreased by 5 % to COP 1,959,000/kg, but increased by 7 % in US dollar terms due to a strengthening of the Colombian peso against the US dollar. Annual average prices of coca paste at the farm-gate have been relatively stable at COP 210,000/kg between 2004 and 2006. However, since 2005, differences between monthly averages varied more widely than at any other time since the start of systematic price monitoring. This coincides with a massive up-scaling of manual eradication campaigns in coca cultivation areas in 2005. Farm-gate prices in Colombia are thought to be influenced by armed groups who are able to control prices in their region of influence.

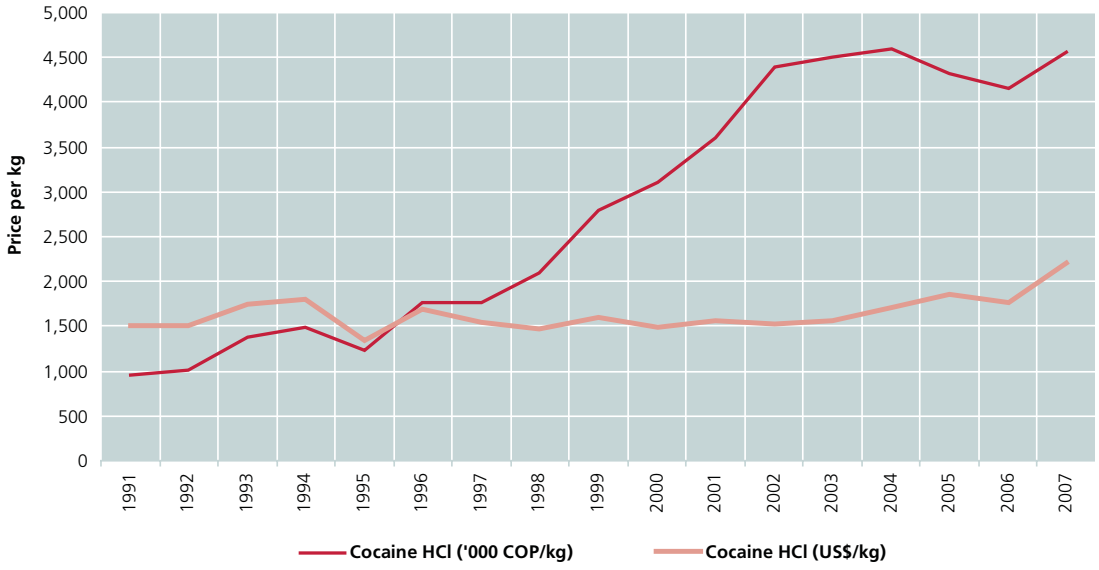
In 2007, the wholesale price of cocaine HCl increased in both Colombian peso and US dollar terms and reached US$ 2,198/kg, an increase of 25% over 2006. This is the highest US dollar price recorded since 1991. It is similar in level to the Colombian peso prices in the years 2003 and 2004.

The price increase observed over the last two to three years for opium latex and heroin did not continue in 2007. In Colombian pesos, the price of opium latex at the farm-gate remained stable at COP 591,000/kg, the wholesale price of heroin fell by 5% to COP 22,294/kg. In US dollar terms, however, prices for both products increased.

Colombia, monthly farm-gate prices of coca paste ('000 COP/kg), Jan. 2000 to Dec. 2007

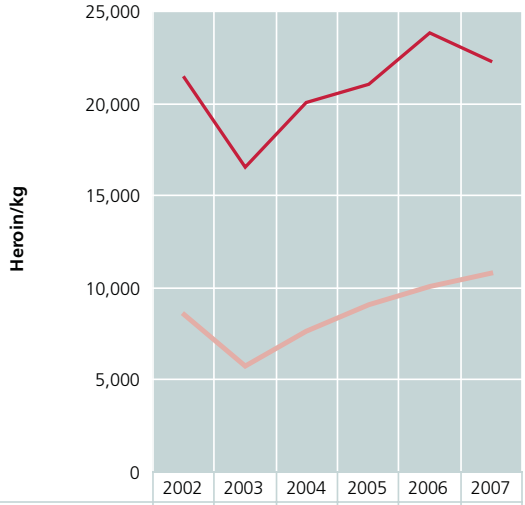


Colombia, annual wholesale prices of cocaine HCl (US$ and '000 COP), 1991 to 2007



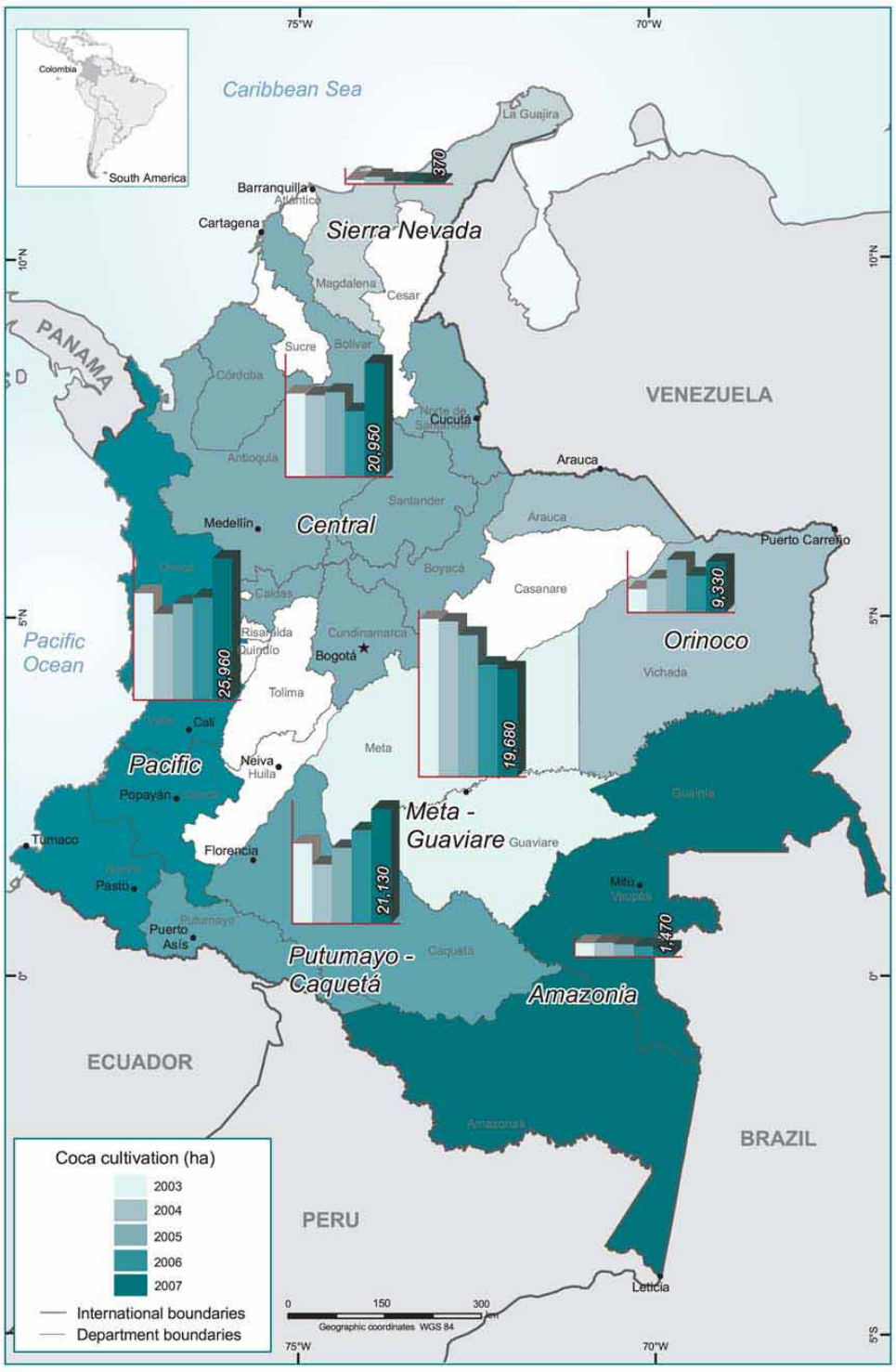
Colombia, opium latex (farm-gate) and wholesale heroin prices, 2002 to 2007

	2002	2003	2004	2005	2006	2007
'Opium latex ('000 COP/kg)	529	444	433	534	593	591
Opium latex (US$/kg)	211	154	164	230	251	286



	2002	2003	2004	2005	2006	2007
Heroin ('000 COP/kg)	21,370	16,561	20,067	21,051	23,822	22,294
Heroin (US$/kg)	8,520	5,740	7,635	9,070	10,103	10,780

Colombia, coca cultivation by region, 2003 to 2007



3.1.4 Lao PDR

Fact Sheet – Laos Opium Survey 2007[1]

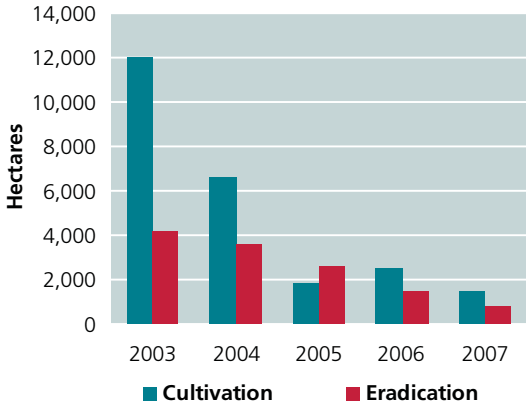
	2006	Change on 2006	2007
Opium poppy cultivation	2,500 ha	-40%	1,500 ha
Average dry opium yield	8 kg/ha	-25%	6 kg/ha
Potential production of dry opium	20 mt	-54%	9.2 mt
No. of households growing opium poppy	5,800		n/a
Average price of opium[2]	US$ 550/kg	+77%	US$ 974/kg
Eradication[3]	1,518 ha	-49%	779 ha
Number of opium addicts	11,200	-31%	7,700[4]
Average drug prevalence rate[5]	0.58%		0.30%

Cultivation and eradication

The total area under opium poppy cultivation in the Lao PDR in 2007 was estimated at 1,500 ha – a 40% decrease over production in 2006 (2,500 ha). This brings cultivation to its the lowest level since 1998 when opium poppy cultivation peaked at 26,600 ha. Although opium cultivation has been virtually eliminated, the geographical pattern of the remaining cultivation is dynamic. In 2007, opium poppy cultivation was found in five of the six northern provinces surveyed.

According to Government reports, 779 ha were eradicated. Levels of eradication were highest in Phongsaly with 264 ha, followed by Huapanh (209 ha) and Luang Prabang (143 ha).

Lao PDR, opium poppy cultivation* and eradication (ha), 2003 to 2007



* after eradication

1 The information in this section comes from the report on Opium Poppy Cultivation in South East Asia (UNODC/Governments of Lao PDR, Myanmar and Thailand, October 2007), and can also be found on the internet (http://www.unodc.org/unodc/en/crop-monitoring/index.html).

2 Source LCDC, Provincial authorities survey. Due the limited market for opium, a clear distinction between farm-gate, wholesale and retail price levels could not be established.

3 Source: LCDC. The 2006 eradication campaign was conducted before and after the survey. In 2007, eradication was conducted after the survey.

4 The figure does not take into account possible relapse of recently treated addicts (normally > 20%).

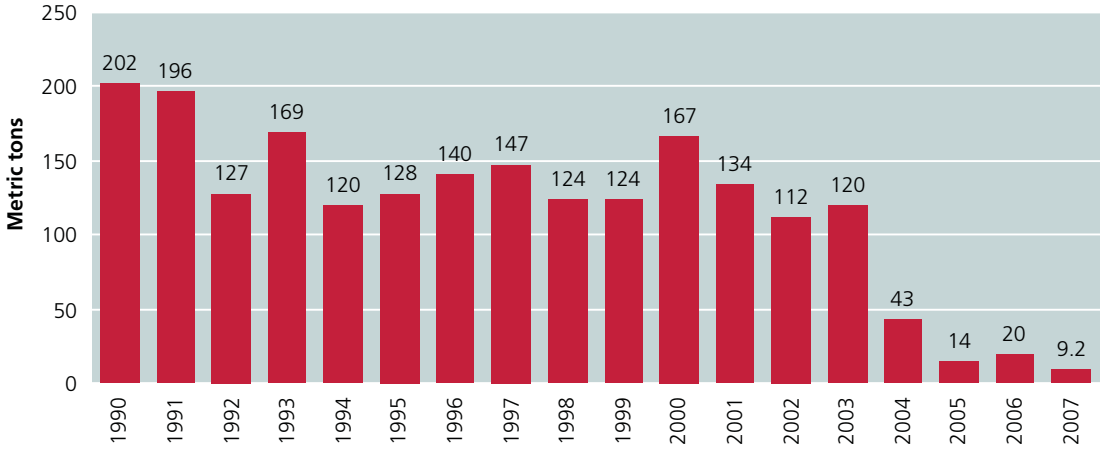
5 Based on 6 northern provinces in 2006 and on 10 in 2007.

Production

Opium production in 2007 reached its lowest level since the start of surveying and corresponds to only 5% of the potential opium production of the year 2000 (or 7% of 1998 production).

Based on the estimated area under cultivation, the potential production of opium in 2007 was 9.2 mt, which represents a 54% decrease over 2006. The national opium yield for 2007 averaged an estimated 6 kg/ha.

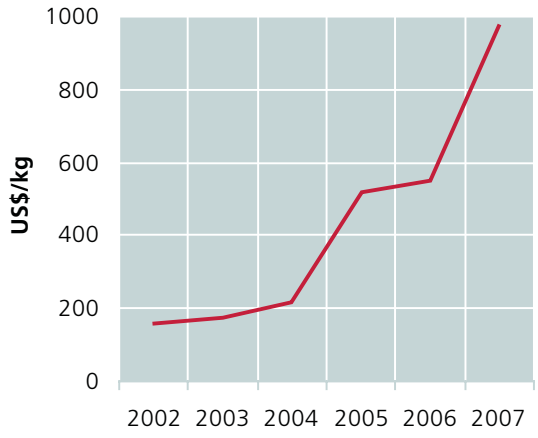
Lao PDR, potential opium production (metric tons), 1990 to 2007



Prices

Opium prices reached US$ 974/kg, representing an increase of 57% over 2006. Prices showed strong regional disparities, varying between US$ 537/kg in Namore district, Oudomxay, to US$ 1,613 in Nan district, Luang Prabang. Virtually all of the opium produced in Lao PDR is thought to be consumed locally. Due to this limited market for opium, a clear distinction between farm-gate, wholesale and retail price levels could not be established.

Lao PDR, annual opium prices (US$/kg), 2002 to 2007



Addiction

In 2007, opium addiction rates decreased. The reported number of addicts in the 10 northern provinces was 7,706. The figure does not take into account the possible relapse of recently treated addicts, which is estimated at 20%. Opium prevalence rates remained higher in the two main opium producing provinces (Phongsaly and Huaphanh) than in the rest of the country.

3.1.5 Myanmar

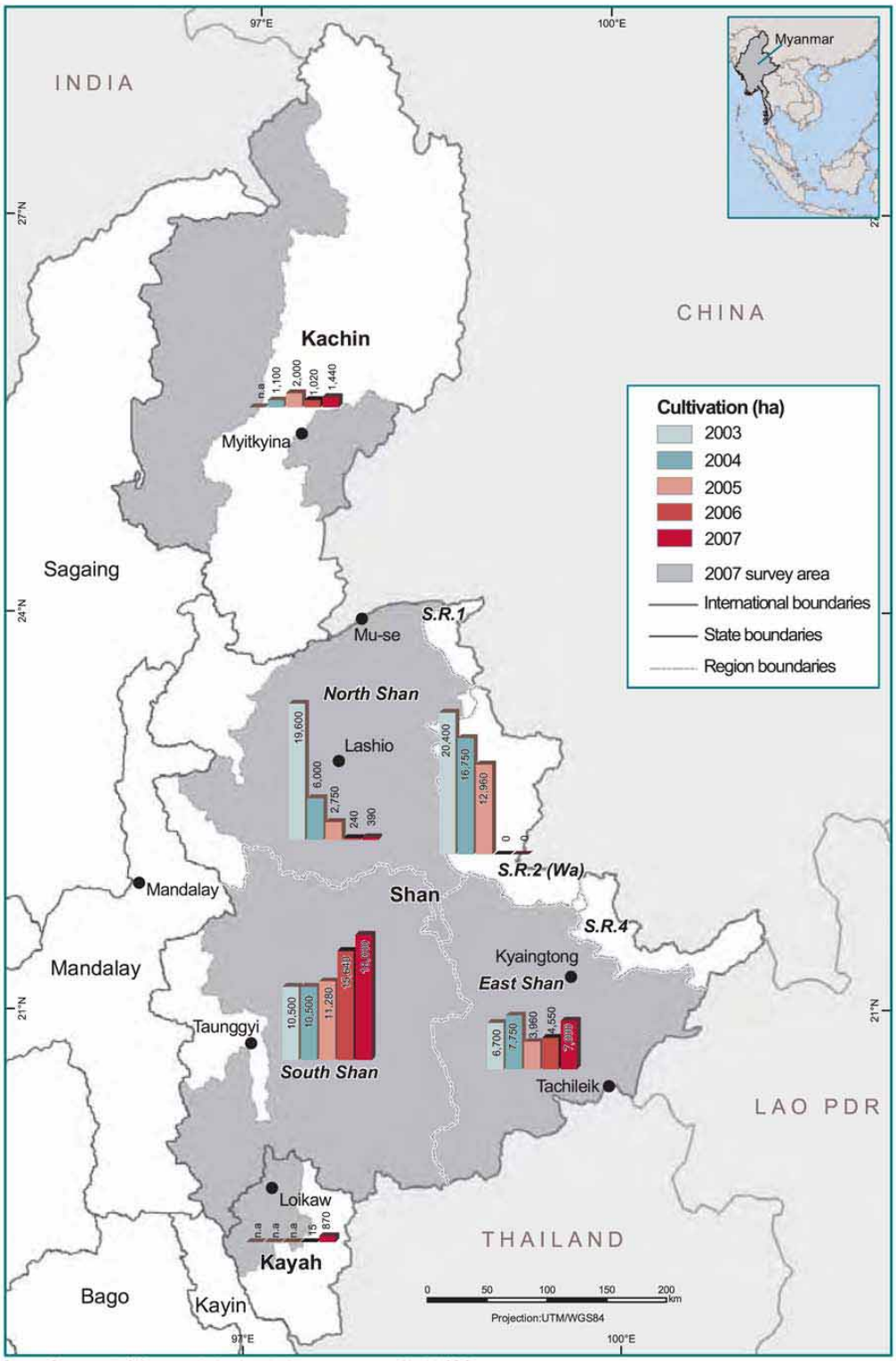
Fact Sheet – Myanmar Opium Survey 2007[1]

	2006	Change on 2006	2007
Opium poppy cultivation in Myanmar Of which in Shan State	21,500 ha 20,500 ha	+29% +24%	27,700 ha 25,400 ha
Average opium yield (weighted by area)	14.6 kg/ha	+14%	16.6 kg/ha
Potential production of dry opium in Myanmar (including Shan State)	315 mt	+46%	460 mt
Average farm-gate price of opium[2]	US$ 230/kg	+15%	US$ 265/kg
Total potential value of opium production	US$ 72 million	+67%	US$ 120 million
Estimated number of households involved in opium poppy cultivation in Myanmar	126,500	+29%	163,000
Number of persons involved in opium poppy cultivation in Myanmar	632,500	+29%	815,000
Estimated number of households involved in opium poppy cultivation in the Shan State	120,000	+24%	148,900
Average yearly household income in opium producing households (Shan State)	US$ 437	+15%	US$ 501
Of which from opium sales	US$ 217	+5%	US$ 227
Per capita income in opium producing households (Shan State)	US$ 87	+15%	US$ 100
Household average yearly income in non-opium poppy producing households (Shan State)	US$ 318	+43%	US$ 455
Per capita income in non-opium producing households (Shan State)	US$ 64	+43%	US$ 91
Addiction prevalence rate in Shan State and Kachin (population aged 15 and above)	0.60 %	+25%	0.75 %
Reported opium poppy eradication in Myanmar	3,970 ha	-9%	3,598 ha

1 The information in this section comes from the report on Opium Poppy Cultivation in South East Asia (UNODC/Governments of Lao PDR, Myanmar and Thailand, October 2007), and can also be found on the internet (http://www.unodc.org/unodc/en/crop-monitoring/index.html).

2 For 2007: price at harvest time.

Myanmar, opium poppy cultivation, 2004 - 2007



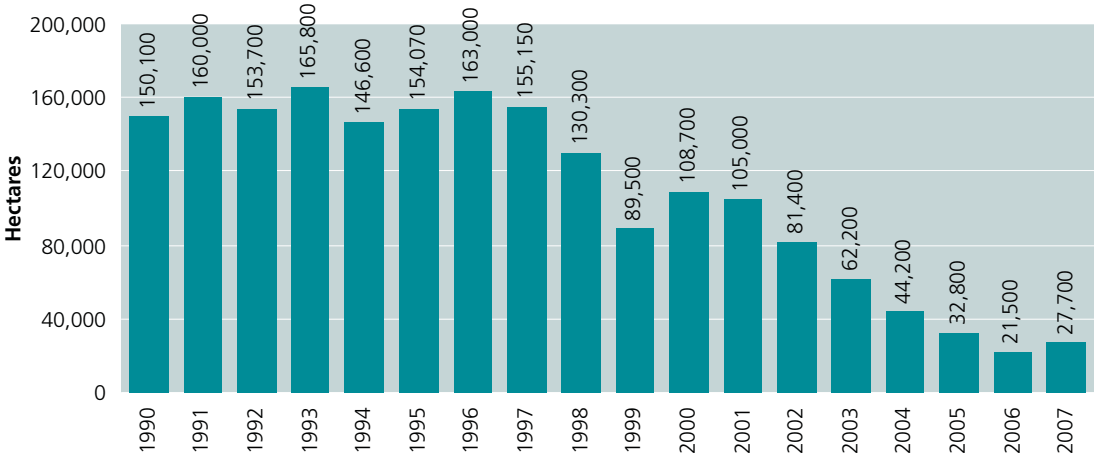
Source: Government of Myanmar - National monitoring system supported by UNODC
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Cultivation and eradication

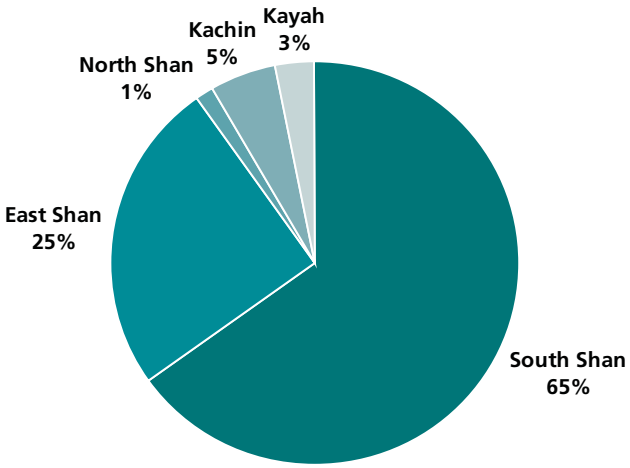
In 2007, opium poppy cultivation in Myanmar increased, for the first time in seven years, to 27,700 ha. This was a 29% increase over 2006. The largest increases in absolute terms took place in East and South Shan State, which contain 25% and 65% (respectively) of national cultivation. In Kayah State, which was surveyed for first time in 2006, opium poppy cultivation also increased. The same trend was seen in Kachin State, which accounted for 5% of national cultivation. In North Shan State, cultivation remained very low. In Special Region 2 (Wa), opium elimination has been effectively sustained.

Official reports from the Myanmar Government indicate that 3,598 ha of opium poppy were eradicated in 2007. The level of eradication varied greatly between regions. It increased by 33 times in East Shan State, and decreased by 58% in South Shan State. In North Shan State, eradication increased 11 times over 2006 reflecting the Government's efforts to control opium poppy cultivation at a time of renewed cultivation. Efforts by local authorities to control cultivation along the Chinese border has pushed opium poppy fields into the more remote areas and townships of Kachin State.

Myanmar, opium poppy cultivation (hectares), 1990 to 2007



Myanmar, distribution of opium poppy cultivation by region, 2007



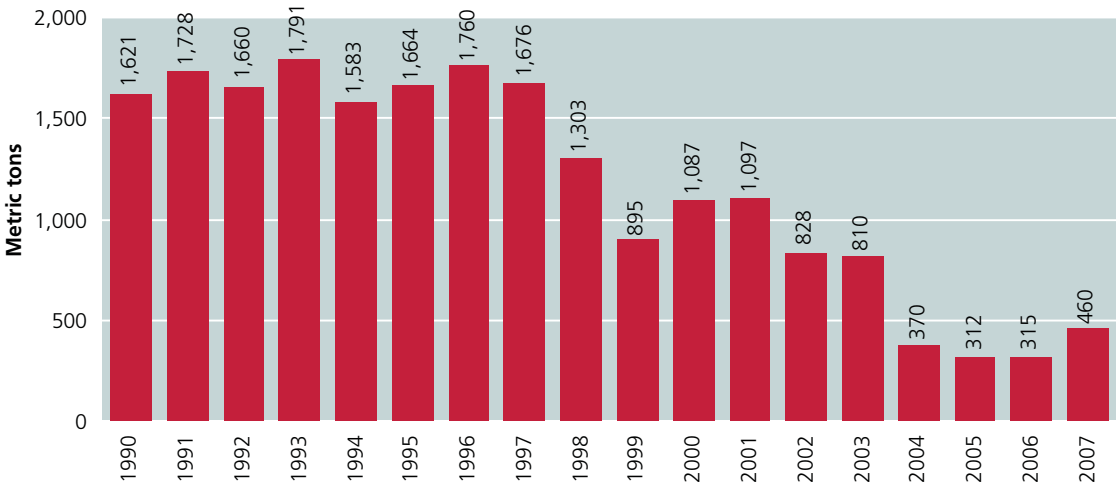
Opium poppy eradication as reported by the Government of the Union of Myanmar (ha), 2002 to 2007

Administrative Unit	2002	2003	2004	2005	2006	2007
North Shan State	6,223	235	172	1,211	76	916
South Shan State	511	182	2,170	1,203	3,175	1,316
East Shan State	14	91	195	124	32	1101
Special Region 2 (Wa)	94	55	0	0	0	0
Shan State	**6,842**	**563**	**2,537**	**2,538**	**3,283**	**3,333**
Kachin State	97	56	126	1,341	678	189
Kayah State	527	9	83	8	0	12
Other States	3	8	74	20	9	64
Total	**7,469**	**638**	**2,820**	**3,907**	**3,970**	**3,598**

Production

In 2007, the total estimated production of opium amounted to 460 mt, which is a 46% increase in comparison to 2006. The rise was mainly due to increased cultivation in South and East Shan State, where the plant has relatively high yields, and which experienced favourable weather conditions. South Shan State, with the largest area under cultivation, produced 65% of Myanmar's total opium production in 2007.

Myanmar, potential opium production (metric tons), 1990 to 2007



Prices

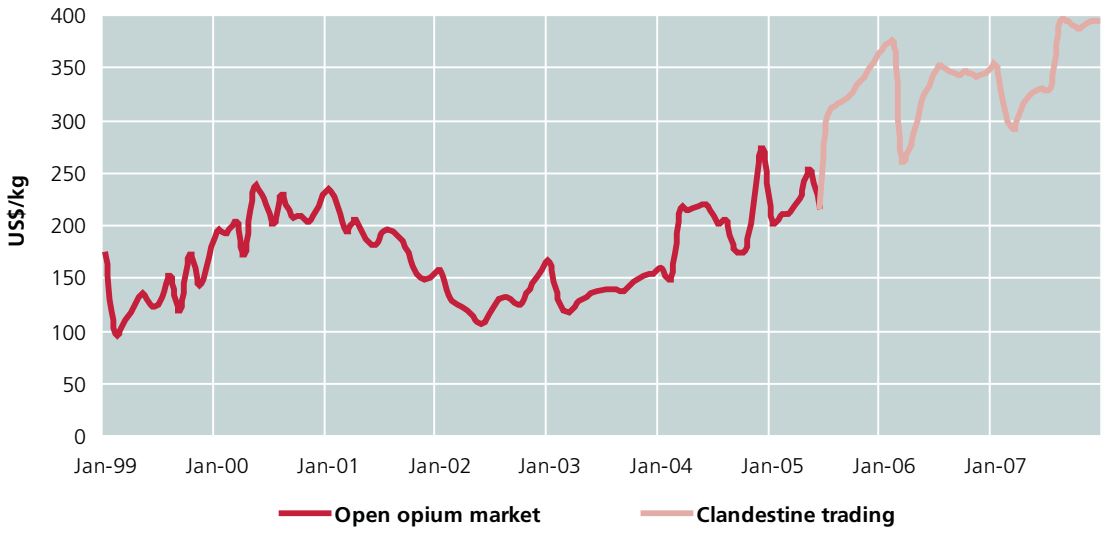
The average farm-gate price of opium at harvest time was US$ 265/kg. This represents an increase of 15% compared to the average price reported by farmers for the year 2006. The highest prices were found in North Shan State and the lowest in South Shan State. The highest price increases compared to last year were observed in East Shan State, whereas in Kachin, South Shan and North Shan, price increases were moderate.

Price differences seem to reflect regional supply differentials, as well as the fragmentation of the country's opium market.

Overall, prices in Mong Pawk have shown an increasing trend since 2003. Although in 2007, the highest monthly average price since start of the monitoring was recorded, the year-on-year increase has been considerably less pro-

nounced in 2007 than in the three preceding years. As in 2006, monthly trader prices reported from Mong Pawk showed seasonal fluctuations with price minimums recorded early in the year around opium harvest time. Mong Pawk is located in the Wa Special Region 2 bordering China and has been free of opium poppy cultivation since 2006. Formerly a major opium market, trading has taken place clandestinely since the opium ban by local authorities in 2005.

Monthly prices for dry opium at Mong Pawk, Wa Special Region 2, Shan State (US$/kg), Jan. 1999 to Dec. 2007



Household income and strategies

The average annual cash income of an opium poppy cultivating household was estimated at US$ 501, approximately US$ 56 higher than the average annual income of a non-opium poppy cultivating household. This year, a larger number of households (+29%) was able to produce an even larger amount of opium (+46%) at a higher price (+15%) compared to 2006. As a consequence, the total value of national opium production increased by 67% to US$ 120 million. Because the income from opium was distributed among a larger number of households, this only led to a moderate income increase for opium poppy growers (+15%).

The 2007, the average cash income of households was higher for villages that never grew opium poppy, compared to those that had stopped opium poppy cultivation. The findings also showed that households in former poppy growing villages did not find adequate ways of substituting their lost income from opium. The survey showed that villages reporting opium poppy cultivation continue to have significantly lower food security compared to opium poppy-free villages. Villages with access to paddy land tend to cultivate less opium poppy since they can achieve a higher level of food security with rice cultivation. The most common coping strategy for farmers who had ceased opium poppy cultivation, was to grow more rice and maize and to sell livestock. Some emigration occurred from the Wa region where opium poppy cultivation was abandoned in 2005.

Addiction

The overall proportion of opium users in Shan State, Kachin and Kayah represents 0.75% of the total adult population. Within the surveyed area, the average level of addiction was higher in villages with opium poppy cultivation (2.5%), compared to non-growing villages (0.3%). As in previous years, opium addiction continued to be a predominantly male phenomenon: 1.3% of the male population was addicted compared to 0.2% of the female population.

3.1.6 Peru

Fact Sheet – Peru Coca Survey 2007[1]

		2006	Variation on 2006	2007
Coca cultivation		51,400 ha	+4%	53,700 ha
Of which in	*Alto Huallaga*	*17,100 ha*	+1%	17,200 ha
	Apurímac-Ene	*15,800 ha*	+1%	16,000 ha
	La Convención-Lares	*12,700 ha*	+1%	12,900 ha
	Elsewhere	*5,800 ha*	+31%	7,600 ha
Weighted average sun-dried coca leaf yield		2,200 kg/ha	0%	2,200 kg/ha
Potential production of sun-dried coca leaf[2]		114,100 mt	2%	116,800 mt
Potential production of cocaine HCl		280 mt	+4%	290 mt
In per cent of global production		28%		29%
Average farm-gate price of sun-dried coca leaf		US$ 2.5/kg	0%	US$ 2.5/kg
Average farm-gate price of coca paste		US$ 551/kg	+9%	US$ 600/kg
Average price of cocaine HCl		US$ 825/kg	+3%	US$ 851/kg
Potential farm-gate value of sun-dried coca leaf		US$ 285 million	+2%	US$ 292 million
Reported eradication of coca cultivation		12,688 ha	-5%	12,072 ha
Reported seizure of sun-dried coca leaves		1,067 mt	+74%	1,858 mt
Reported seizure of coca paste		5,044 kg	+24%	6,260 kg
Reported seizure of cocaine HCl		14,749 kg	-45%	8,119 kg
Reported destruction of coca laboratories[3]		718	-7%	665
Of which cocaine HCl processing laboratories		11	+45%	16
Reported seizure of opium latex		109 kg	+14%	126 kg

Cultivation and eradication

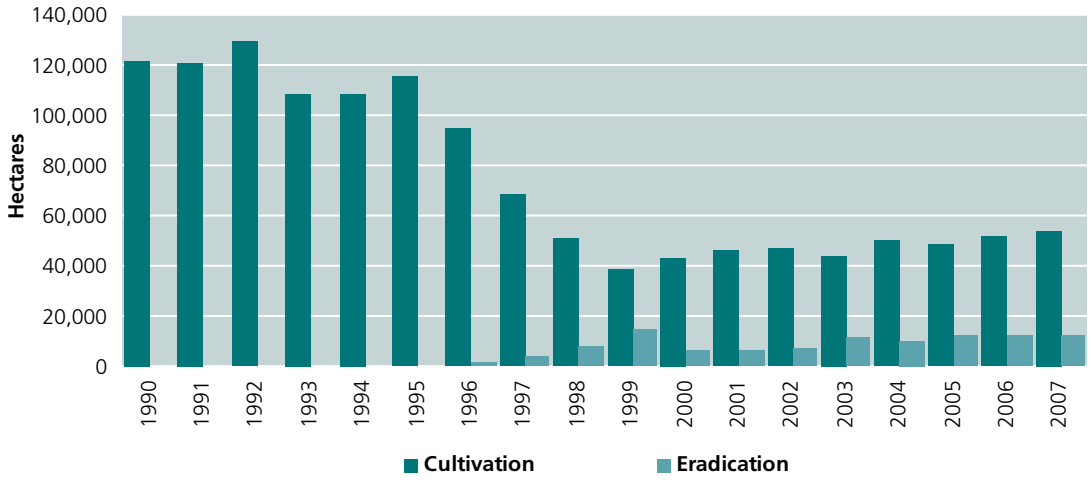
In 2007, coca cultivation in Peru expanded by 4 % to 53,700 hectares. Despite experiencing the second consecutive increase in two years, coca cultivation remained well below the levels registered in the mid 1990s, when Peru was the world's largest cultivator of coca bush. Peru remains the world's second largest coca cultivating country.

1 The information in this section comes from the report on Coca Cultivation in Peru (UNODC/Government of Peru, June 2008), and can also be found on the internet (http://www.unodc.org).

2 Includes all coca leaf potentially produced. For the calculation of coca leaf available for cocaine production, 9,000 metric tons of sun-dried coca leaf were deducted from this figure, which, according to Government sources, is the amount used for traditional purposes.

3 Excluding coca leaf macerations pits.

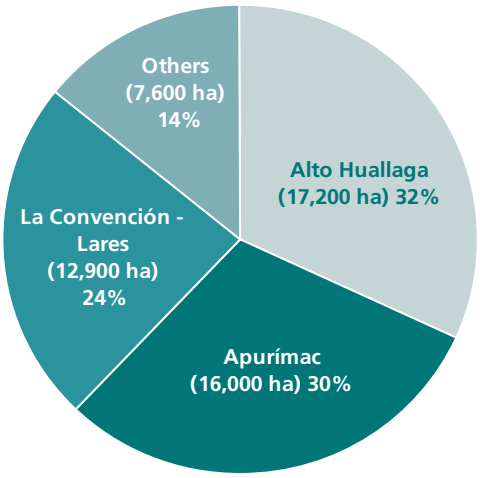
Peru, coca cultivation and eradication (hectares), 1990 to 2007



Peru's three largest coca regions represented 86 % of the total area under coca bush cultivation in 2007. Cultivation levels in each region remained relatively stable, increasing only marginally. In Alto Huallaga, the largest cultivating region, the expansion of the area under cultivation in some localities was offset by the eradication of coca fields in others.

In 2007, the smaller coca cultivating regions contributed much more to the overall increase both in percentage and absolute terms (over 1,800 ha). The coca area in Inambari-Tambopata, a region close to the border with Bolivia, increased significantly, by 21% or 500 ha. This region now contains 2,900 ha under coca cultivation, and has experienced its third consecutive increase in three years. The small and partly new coca cultivation areas in the North and North East of the country increased moderately and continued to constitute only a small proportion of the overall area under cultivation. Eradication of coca bush, which in Peru is done manually, decreased slightly but remained at the relatively high level of over 12,000 ha.

Peru, coca cultivation by regioin, 2007



Government reports on eradication indicate that opium poppy cultivation exists in Peru. When the last estimate was released by the Government in 2004, the level of opium poppy cultivation was estimated at 1,400 ha.[4]

Production

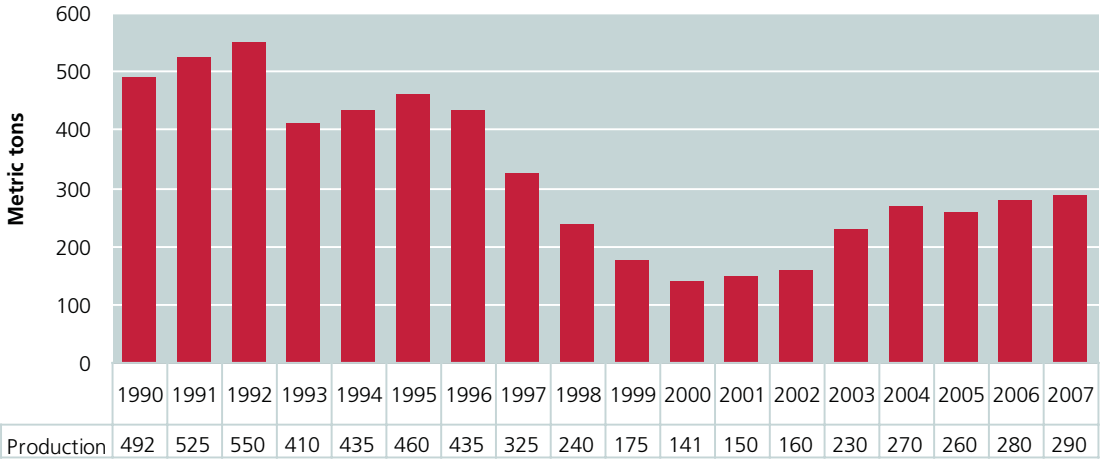
Total cocaine production was 290 mt in 2007, an increase by 4 % over 2006. While this is the highest production figure since 1997, it is still much lower than the amounts registered during the first half of the 1990s. In 2007, Peru accounted for 29 % of global cocaine production.

Prices

Although prices of coca leaf and derivatives had fallen between 2005 and 2006, prices were stable to increasing between 2006 and 2007. On average, farm-gate prices for sun-dried coca leaf remained unchanged at US$ 2.5/kg in 2007. Seasonal variation and regional price differences continue to exist. Inambari-Tambopata, a region en route to Bolivia where coca leaf is traded at a higher price level, had the highest average price of US$ 3.1/kg, while the lowest average price (US$ 2.0/kg) was recorded

4 UNODC and the Government of Peru are currently working to establish a methodology for measuring the extent of opium poppy cultivation in Peru.

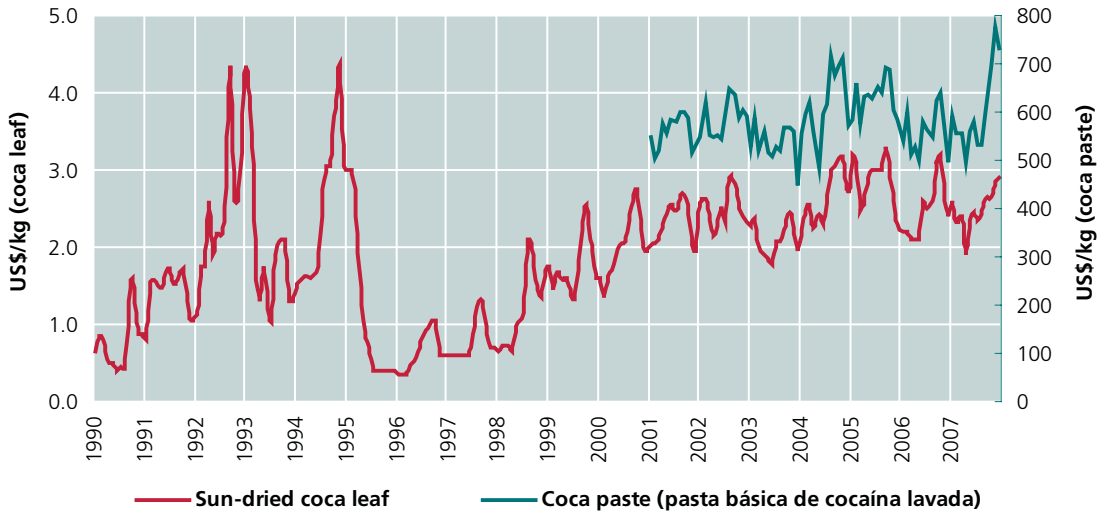
Peru, potential cocaine production (metric tons), 1990 to 2007



	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Production	492	525	550	410	435	460	435	325	240	175	141	150	160	230	270	260	280	290

Note: Production estimates from 2003 to 2005 were revised in 2007 based on updated information on the amount of coca leaf necessary to produce one kilogramme of cocaine HCl.

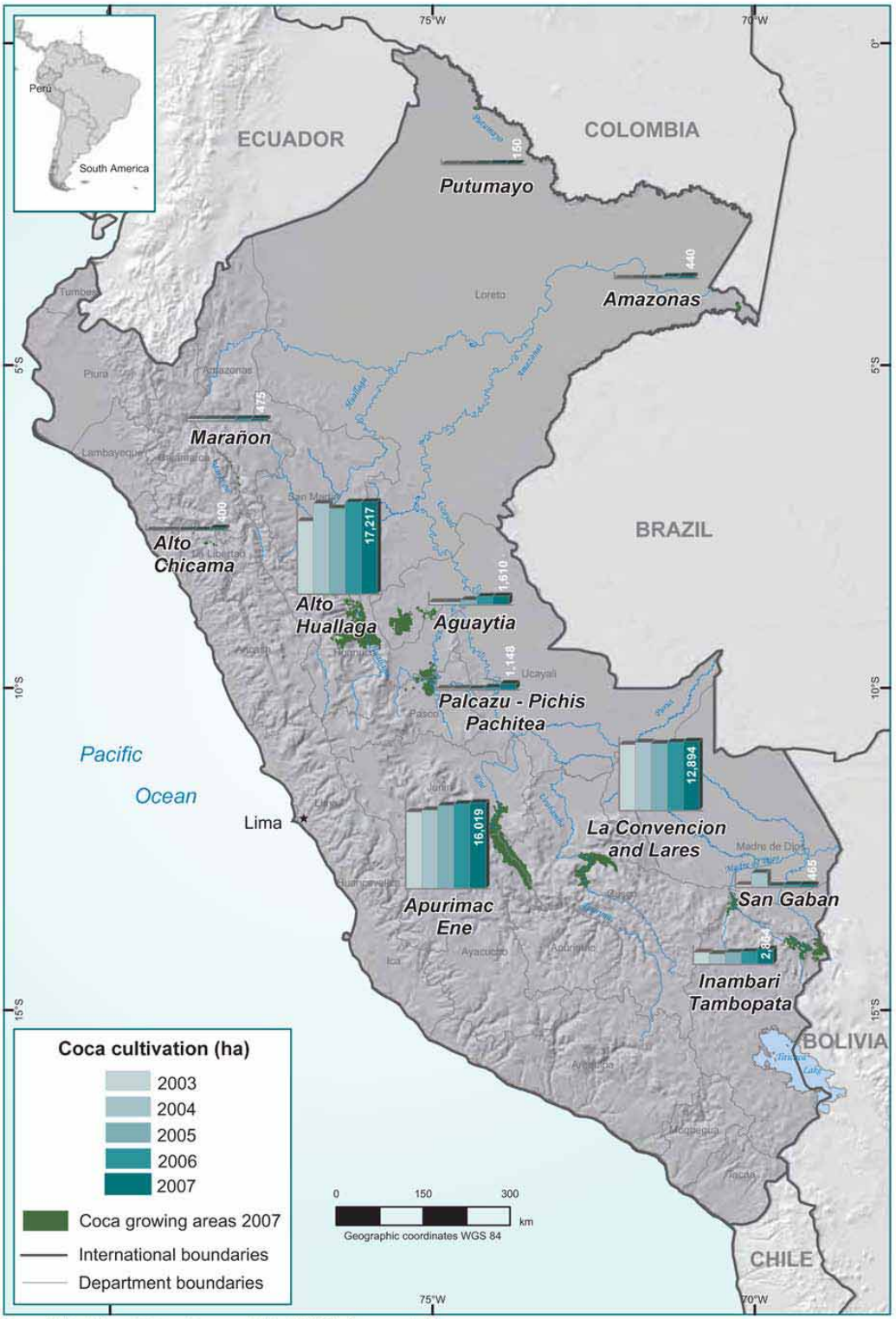
Peru, monthly farm-gate prices of sun-dried coca leaf and coca paste (US$/kg)



in Apurímac, a large, centrally located coca region linked to cocaine production.

Unlike coca leaf prices, the price for coca paste increased on average by 9% from US$ 551/kg in 2006 to US$ 600/kg in 2007, mainly due to a steep rise in the last quarter of the year (This occured paralled to an appreciation of the Sol against the dollar.) Despite this increase, the average price of coca paste remained at a lower level than in 2004 and 2005. The wholesale price of cocaine in production regions increased only slightly by 3% from US$ 825/kg in 2006 to US$ 851/kg in 2007.

Peru, coca cultivation by region, 2003 to 2007



Source: National of monitoring system supported by UNODC - Government of Peru
The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations

3.2 Seizures

A complete set of seizures tables can be found on the UNODC website at:
www.unodc.org

3.3 Seizures of illicit laboratories

A complete set of seizures of illicit laboratories tables can be found on the UNODC website at: www.unodc.org

3.4 Prices

3.4.1 Opiates: Wholesale, street prices and purity levels

Retail prices (street price), US$/gram

EUROPE	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Austria	270	*250*	203	132	138	103	87	70	94	57	75	44	92	68	75	74	69
Belgium	*90*	105	105	77	75	75	56	37	41	41	37	27	29	31	32	*31*	32
Denmark	287	265	151	139	228	191	157	188	147	175	116	111	126	122	94	123	100
Finland	*800*	696	770	724	606	455	414	257	254	250	207	121	188	*195*	*195*	182	125
France	*145*	153	150	135	144	170	156	113	119	111	*32*	34	47	57	68	69	67
Germany	105	75	96	74	91	90	74	51	43	45	39	38	38	46	49	48	46
Greece	120	175	63	44	105	88	77	80	55	55	55	53	45	65	51	31	75
Italy	167	148	140	29	55	41	115	98	120	95	71	68	59	63	69	68	66
Luxembourg	*172*	*150*	*150*	*150*	172	202	138	141	133	126	69	67	*67*	45	101	102	*102*
Netherlands	49	*50*	55	49	*55*	61	48	55	34	30	25	43	35	40	57	38	38
Norway	1,680	525	510	275	349	300	282	198	186	166	128	157	165	198	148	220	*220*
Iceland	*184*	*376*	*374*	*407*	380	410	377	372	*372*	*372*	*372*	*372*	*372*	*372*	*372*	*372*	*372*
Portugal	83	82	72	63	65	79	68	55	74	37	45	45	41	54	52	52	52
Spain	*175*	*185*	*180*	*126*	132	120	112	88	82	75	59	57	61	75	81	80	78
Sweden	*225*	*210*	*195*	*180*	*165*	337	346	135	130	126	113	129	133	128	119	92	*92*
Switzerland	312	221	248	126	164	190	116	81	96	167	53	45	39	*48*	*48*	*48*	39
United Kingdom	157	144	*144*	134	129	125	108	118	120	108	107	86	91	100	110	93	71
Ireland	*196*	*180*	*180*	*168*	*161*	179	275	228	213	204	176	170	179	179	248	252	251
Average unweighted in US$	290	222	210	168	179	179	167	131	128	124	99	93	100	105	109	110	105
inflation adjusted 2006 US$	**447**	**328**	**302**	**235**	**243**	**236**	**214**	**165**	**159**	**151**	**116**	**105**	**112**	**115**	**117**	**113**	**105**
Weighted average in US$	173	149	147	107	118	119	118	93	94	87	64	59	62	70	75	72	67
Inflation adjusted in 2006 US$	**268**	**221**	**211**	**149**	**161**	**158**	**151**	**117**	**117**	**105**	**74**	**67**	**70**	**77**	**81**	**74**	**67**
Weighted average in Euro	**136**	**120**	**113**	**91**	**100**	**91**	**93**	**82**	**84**	**81**	**69**	**66**	**66**	**62**	**61**	**58**	**53**
Adjusted for inflation in 2006 Euro	**200**	**168**	**152**	**119**	**126**	**112**	**112**	**97**	**98**	**93**	**78**	**73**	**72**	**66**	**63**	**60**	**54**

Sources: UNODC ARQ data, EUROPOL and UNODC estimates (in italics)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
USA	281	279	268	268	204	196	170	151	162	137	126	110	88	116	152	195	172
Adjusted for inflation in 2006 Euro (g)	**433**	**413**	**385**	**374**	**277**	**259**	**219**	**190**	**200**	**166**	**148**	**125**	**98**	**127**	**162**	**201**	**172**

Sources: ONDCP: 1990-2000 data, UNODC ARQ: 2001-2002 data, ONDCP, The Price & Purity of Illicit Drugs 1981-2003, for 2003 and CEWG for 2004; UNODC ARQ for 2005 and 2006.

Wholesale, US$/kg

EUROPE	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Austria	*55,244*	*46,145*	63,000	36,000	37,752	30,491	30,222	28,831	34,565	31,087	25,026	19,553	23,547	33,900	37,260	36,168	37,640
Belgium	*30,000*	30,000	28,500	26,600	29,586	32,580	24,307	21,761	20,847	18,557	18,360	20,292	22,229	20,960	23,040	23,336	18,820
Denmark	*110,000*	*100,000*	85,000	95,000	117,625	106,805	86,806	100,465	65,693	61,507	23,585	32,889	20,803	41,770	32,820	37,741	35,967
Finland	*353,774*	*353,774*	*353,774*	*353,774*	*353,774*	353,774	*321,586*	*199,442*	*197,856*	*194,357*	*161,034*	*44,840*	51,804	*51,800*	68,314	69,192	*69,192*
France	180,000	72,250	80,000	63,750	*75,000*	66,035	46,603	32,230	25,885	25,596	22,158	26,906	23,547	28,250	31,050	31,450	35,550
Germany	45,244	36,145	41,667	35,206	36,448	35,256	27,890	25,686	25,608	24,770	20,263	17,816	20,325	21,510	25,723	25,765	22,510
Greece	90,000	70,000	35,000	28,000	29,536	34,362	39,090	28,775	21,020	20,714	17,320	16,592	17,425	18,650	17,540	14,782	19,450
Italy	67,500	60,000	108,000	42,581	47,690	35,786	48,152	37,795	36,459	36,894	31,163	32,979	33,669	29,830	30,109	30,496	28,830
Luxembourg	*86,000*	*75,000*	*75,000*	49,500	*86,000*	57,079	59,852	54,786	52,630	50,368	*48,000*	50,369	*50,369*	*24,700*	43,473	44,030	*44,030*
Netherlands	23,850	*25,000*	26,550	23,850	*23,850*	24,384	20,572	13,810	14,056	16,985	14,703	15,757	29,199	17,730	*17,730*	18,240	16,625
Norway	*220,000*	*200,000*	212,500	151,099	101,744	*85,000*	72,520	62,209	64,918	49,872	44,561	35,874	37,676	48,234	52,790	53,490	53,325
Portugal	50,000	55,000	46,667	31,500	32,428	43,171	45,902	38,841	30,483	29,339	25,398	31,310	25,839	31,000	34,075	34,512	34,512
Spain	160,000	*125,000*	*122,500*	*91,000*	74,418	79,880	84,395	63,880	52,755	53,820	43,596	32,000	41,202	48,420	46,350	47,055	47,371
Sweden	*140,000*	*130,000*	*115,000*	*95,000*	*117,625*	62,655	64,829	65,771	63,190	61,022	41,626	33,702	34,738	41,900	31,648	35,970	35,970
Switzerland	124,000	153,800	228,875	47,460	52,823	54,850	41,665	37,234	34,294	33,422	29,568	16,082	19,149	*22,340*	23,580	25,420	21,470
United Kingdom	53,940	43,940	*43,500*	43,210	*42,500*	42,004	34,846	39,491	41,667	29,126	26,718	25,926	30,620	34,340	39,041	33,249	28,320
Ireland	*63,940*	*53,940*	*53,500*	*53,210*	*52,500*	81,479	77,643	36,531	34,396	43,478	37,600	36,441	36,441	*30,510*	*30,510*	33,967	33,967

Sources: ARQ data and EUROPOL and in italic UNODC

Average unweighted in US$	109,029	95,882	101,120	74,514	77,135	72,094	66,287	52,208	48,019	45,936	37,099	28,784	30,505	32,108	34,415	34,992	34,326
infl.adj. in US$	**168,188**	**141,966**	**145,342**	**103,917**	**104,880**	**95,385**	**85,191**	**65,546**	**59,348**	**55,576**	**43,408**	**32,751**	**34,181**	**35,176**	**36,728**	**36,112**	**34,326**
Weighted average in US$	93,652	68,208	77,441	54,923	56,381	52,570	48,000	39,481	36,529	34,283	28,509	25,809	28,196	30,340	32,326	31,845	30,707
Inflation adj. (kg) in 2006 US$	**144,467**	**100,991**	**111,309**	**76,595**	**76,661**	**69,555**	**61,688**	**49,568**	**45,147**	**41,477**	**33,357**	**29,365**	**31,595**	**33,238**	**34,498**	**32,864**	**30,707**
Inflation adj. (gram) in 2006 US$	**144**	**101**	**111**	**77**	**77**	**70**	**62**	**50**	**45**	**41**	**33**	**29**	**32**	**33**	**34**	**33**	**31**
Weighted in Euro (g)	**74**	**55**	**60**	**47**	**47**	**40**	**38**	**35**	**33**	**32**	**31**	**29**	**30**	**27**	**26**	**26**	**24**
Adjusted for inflation in 2006 Euro (g)	**108**	**77**	**80**	**61**	**60**	**50**	**46**	**41**	**38**	**37**	**35**	**32**	**32**	**29**	**27**	**27**	**25**

Sources: UNODC ARQ data, EUROPOL and UNODC estimates (in italics)

USA	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Average in US$	162,500	155,000	150,000	146,000	142,500	146,000	141,875	129,375	125,000	107,000	81,200	59,500	50,750	65,500	68,800	65,000	87,720
Inflation adj. (kg) in 2006 US$	**250,673**	**229,498**	**215,599**	**203,611**	**193,755**	**193,169**	**182,335**	**162,427**	**154,491**	**129,454**	**95,010**	**67,700**	**56,866**	**71,758**	**73,425**	**67,080**	**87,720**
Inflation adj. (gram) in US$	**251**	**229**	**216**	**204**	**194**	**193**	**182**	**162**	**154**	**129**	**95**	**68**	**57**	**72**	**73**	**67**	**88**

Source: UNODC ARQ (except CEWG for 2004).

OPIUM

Retail and wholesale prices and purity levels: breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Africa								
North Africa								
Egypt	20.6	18.8 - 22.3		2005	3,250.0	3,080.0 - 3,420.0		2005
Sudan	0.4			2005				
Southern Africa								
Zambia	8.9	8.7 - 8.9		2004				
Americas								
North America								
Canada	28.9	18.6 - 34.0		2006	18,548.4	17,741.9 - 28,225.8		2005
United States	34.0	28.0 - 40.0		2004	31,500.0	28,000.0 - 35,000.0		2005
South America								
Colombia					251.0			2006
Asia								
Central Asia and Transcaucasia								
Armenia	70.0	60.0 - 80.0		2006	25,000.0		69.0 - 80.0	2005
Georgia	25.0	20.0 - 30.0		2006				
Kazakhstan	5.0	2.0 - 7.0		2004	4,455.0	1,500.0 - 12,000.0		2005
Kyrgyzstan	2.0	1.3 - 2.6		2006	1,950.0	1,300.0 - 2,600.0		2006
Tajikistan	3.0	2.0 - 4.0		2006	500.0	200.0 - 800.0		2006
Turkmenistan	5.0	4.0 - 6.0		2006	2,500.0	3,000.0 - 3,500.0		2006
Uzbekistan	4.0	1.0 - 7.0		2006	2,400.0	800.0 - 4,000.0		2006
East and South-East Asia								
China	1.8	1.0 - 3.0		2004	21,000.0	6,500.0 - 80,000.0		2005
Indonesia	29.3	26.6 - 31.9		2006				
Japan	27.8			2004				
Laos					550.0			2006
Malaysia					21,204.6	20,684.2 - 21,725.0		2006
Myanmar	1.1	0.8 - 1.1		2006	960.0			2006
Philippines	3.9	3.8 - 4.1		2006	3,626.5			2005
Republic of Korea	38.9	25.9 - 51.9		2006	5,190.3			2004
Thailand	2.1			2006	1,000.0			2005
Vietnam					350.0	320.0 - 380.0		2005
Near and Middle East /South-West Asia								
Afghanistan	0.1			2005	154.7			2005
Iran (Islamic Republic of)	3.6			2005	807.0			2005
Jordan	126.4	112.4 - 140.4		2005	4,210.0	3,500.0 - 4,910.0		2006
Lebanon					17,000.0	15,000.0 - 30,000.0		2005
Pakistan	0.5	0.4 - 0.7		2004	664.9	236.5 - 446.6		2005
Syrian Arab Republic	4.5	4.5 - 7.5	30.0 - 70.0	2006	4,000.0	3,000.0 - 5,000.0	30.0 - 70.0	2006
United Arab Emirates					3,750.0	3,000.0 - 4,500.0		2006
South Asia								
Bangladesh	2.0	1.5 - 2.5	20.0 - 40.0	2005	1,500.0	1,300.0 - 1,500.0		2006
India					670.0	610.0 - 730.0	3.0 - 6.0	2006
Sri Lanka	4.9			2006				
Europe								
East Europe								
Belarus	10.0			2004	6,500.0			2004
Moldova R.	5.0	3.8 - 6.3		2006				
Russian Federation	23.5	4.7 - 78.5		2006	3,839.3	2,443.0 - 5,235.6		2006
Southeast Europe								
FYR of Macedonia					691.9	629.0 - 754.8		2005
Romania	22.0	6.3 - 12.6		2005	4,717.6			2005
Turkey					4,340.2	1,761.3 - 2,138.7		2005
West and Central Europe								
Austria	10.1	8.8 - 10.6		2006	2,924.9	2,516.1 - 3,145.1		2006
Czech Rep.	4.2			2006	2,540.0			2006
France	18.9			2006				
Latvia *	8.8			2006				
Lithuania	3.0	1.8 - 3.6		2005				
Norway	37.6			2006	12,550.0	10,040.0 - 15,060.0		2006
Sweden					7,913.7	7,194.2 - 8,633.1		2006
United Kingdom	27.4			2006	8232.58			2006

* For 1cm^3 of concentrate of poppy straw

HEROIN

Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Africa								
East Africa								
Kenya (Heroin no.3)	12.9	12.9 - 19.4		2004	16,145.4	12,916.6 - 19,374.8		2004
(Heroin no.4)	15.5	15.5 - 23.3		2004	22,604.0	19,374.8 - 25,833.1		2004
Uganda (Heroin no.3)	12.5	10.0 - 15.0		2005	30,000.0	25,000.0 - 30,000.0		2005
(Heroin no.4)	17.5	15.0 - 20.0		2005				
North Africa								
Algeria	18.1	16.7 - 19.5		2006				
Egypt	28.0	24.5 - 31.5		2006	26,225.0	24,480.0 - 27,970.0		2005
Libya					39,370.1	23,622.1 - 55,118.1		2005
Southern Africa								
Namibia (Heroin no.3 & 4.)	81.3	73.2 - 81.3		2006				
South Africa	32.8			2006				
Zimbabwe	5.9	4.0 - 7.9		2006				
West and Central Africa								
Burkina Faso	55.3	46.1 - 64.5		2006				
Cameroon	29.9			2005				
Congo	10.0	10.0 - 14.0		2005	9,270.2	9,270.2 - 11,124.3		2004
Gabon	92.2	64.5 - 129.0	2.0 - 5.0	2006	92,170.0			2006
Ghana	16.2			2005	19,000.0	16,000.0 - 22,000.0	75 (60-90)	2004
Guinea	17.5	15.0 - 20.0		2005	17,500.0	15,000.0 - 20,000.0		2005
Nigeria (Heroin no.3)	27.8	20.4 - 35.3		2006	20,780.0	20,390.0 - 21,180.0		2006
(Heroin no.4)					22,586.1			2004
Togo (Heroin no.3)	23.9	22.1 - 27.7	35.0 - 45.0	2006	12,900.0	12,900.0 - 23,960.0	45.0 - 70.0	2006
Americas								
Caribbean								
Bermuda	175.0			2006				
Dominican R.	22.0			2006	21,500.0			2006
Trinidad Tobago	128.8			2006	12,880.0			2006
Central America								
Costa Rica	77.2		35.0 - 95.0	2006	76,800.0			2006
El Salvador	69.0	65.0 - 70.0		2006	75,000.0			2006
Guatemala	52.4		75.0	2006	40,000.0		80.0 - 95.0	2006
Honduras	5.3	2.6 - 7.9	63 (50-75)	2004	18,000.0	16,000.0 - 20,000.0	85.0 - 93.0	2005
Panama					10,000.0			2005
North America								
Canada (Heroin no.3)	201.6	161.3 - 322.6	1.0 - 100.0	2005	64,516.1	64,516.1 - 88,709.7		2005
(Heroin no.4)	282.3	282.3 - 645.2		2005	76,612.9	64,516.1 - 181,451.6		2005
Mexico (Heroin no.4)					35,000.0			2006
United States (Heroin no.4)	171.6	50.0 - 375.0	0.1 - 89.0	2006	87,720.0	30,000.0 - 100,000.0	60.0 - 66.0	2006
(Black Tar)	195.0	40.0 - 350.0	5.0 - 53.0	2006	112,500.0	15,000.0 - 210,000.0	16.0 - 74.0	2005
South America								
Argentina					110,000.0	100,000.0 - 120,000.0		2004
Brazil	50.0	30.0 - 70.0		2005	50,000.0			2005
Colombia (Heroin no.4)	20.1			2005	9,992.0			2006
Ecuador					13,000.0	12,000.0 - 15,000.0		2006
Venezuela	11.6	9.3 - 14.0	15.0	2006	9,300.0		90.0	2006
Asia								
Central Asia and Transcaucasia								
Armenia	145.0	130.0 - 160.0		2006	120,000.0		60.0 - 75.0	2005
Georgia	350.0	300.0 - 400.0		2006				
Kazakhstan	10.0	6.0 - 40.0		2006	15,781.3	4,000.0 - 40,000.0		2005
Kyrgyzstan (Heroin no.4)	2.2	2.0 - 2.3		2006	7,000.0	6,000.0 - 8,000.0		2006
Tajikistan (Heroin no.3)	11.5	4.0 - 7.0		2006	1,850.0	1,000.0 - 2,700.0		2006
(Heroin no.4)					4,000.0	3,000.0 - 5,000.0		2006
Uzbekistan	32.5	15.0 - 50.0		2006	16,000.0	7,000.0 - 25,000.0		2006
Turkmenistan	35.0	35.0 - 40.0		2006	22,000.0	20,000.0 - 25,000.0		2006
East and South-East Asia								
Brunei Darussalam	1,250.0			2006				
China	36.2	18.1 - 96.5	20	2004				
Hong Kong SAR, China (no.4)	56.6	46.2 - 64.1	19.0 - 45.0	2006	44,830.0	32,820.0 - 46,980.0		2006
Indonesia	63.8	53.2 - 74.5		2006				
Japan	237.1	215.5 - 258.6		2006	42,000.0	28,000.0 - 56,000.0		2004
Laos					12,000.0	10,000.0 - 14,000.0		2004
Macau SAR, China (Heroin no.3)	50.0	37.0 - 62.0		2005				
Malaysia (Heroin no.3)					7,100.0			2006
(Heroin no.4)					14,645.0	6,500.0 - 22,790.0		2006
Myanmar (Heroin no.4)	72.7	18.2 - 72.7		2006	64,000.0			2006
Philippines	108.8			2005	108,794.2			2005
Singapore (Heroin no.3)	153.4			2006	5,365.0	4,600.0 - 6,130.0		2006
Thailand	105.0	101.9 - 127.4	78.1 - 85.5	2006	12,740.0	10,190.0 - 15,290.0		2006
Vietnam					16,000.0	14,000.0 - 18,000.0		2005

HEROIN

Retail and wholesale prices and purity levels: breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)						WHOLESALE PRICE (per kilogram)					
Region / country or territory	Typical	Range		Purity		Year	Typical	Range		Purity		Year
Near and Middle East/ South- West Asia												
Afghanistan	3.0	2.8 -	3.1			2005	3,016.5	2,830.0 -	3,203.0			2005
Bahrain (Heroin no.3)	265.2	212.2 -	318.2			2005	198,886.2	159,109.0 -	212,145.3			2005
(Heroin no.4)	318.2	265.2 -	397.8			2005	265,181.7	212,145.3 -	318,218.0			2005
Iran (Islamic Republic of)	12.7	5.1	20.3			2005	3,271.0					2005
Israel	45.0	20.0 -	50.0			2006	20,000.0	15,000.0 -	23,000.0			2006
Jordan (Heroin no.3)							16,820.0	14,020.0 -	18,230.0			2006
(Heroin no.4)							21,030.0	18,230.0 -	22,430.0			2006
Lebanon (Heroin no.3)	15.0	10.0 -	20.0	70.0 -	80.0	2006	20,000.0	15,000.0 -	25,000.0	20.0 -	80.0	2005
(Heroin no.4)	40.0	35.0 -	45.0			2005	40,000.0	35,000.0 -	45,000.0	80.0		2005
Oman	51.9					2005	31,137.3					2005
Pakistan (Heroin no.3)	2.7	2.3 -	3.1			2005	2,688.4	2,280.0 -	3,096.8			2005
(Heroin no.4)	4.2	4.6 -	4.2			2005	4,158.8	3,733.5 -	4,584.1			2005
Syrian Arab Republic	20.0	17.0 -	23.0	25.0 -	45.0	2006	17,000.0	15,000.0 -	19,000.0	30.0 -	50.0	2006
United Arab Emirates (No.4)	175.0	170.0 -	180.0			2006	15,000.0	14,000.0 -	16,000.0			2006
South Asia												
Bangladesh (Heroin no.3)	66.4	59.0 -	73.8	3.0 -	6.0	2006	30,000.0	28,000.0 -	35,000.0	3.0 -	4.0	2006
(Heroin no.4)	118.0	103.2 -	147.5	5.0 -	6.0	2006	40,000.0	36,000.0 -	50,000.0	5.0 -	6.0	2006
India							6,100.0	3,658.0 -	9,760.0	15.0 -	20.0	2006
Maldives	77.8					2006	76,930.0					2006
Sri Lanka (Heroin no.3)	27.2	23.3 -	36.4			2006						
Europe												
East Europe												
Belarus (Heroin no.3)	45.0	30.0 -	90.0			2005	24,000.0	14,000.0 -	50,000.0			2005
Moldova R.	62.7	37.6 -	87.8			2006	56,460.0	43,910.0 -	75,280.0			2006
Russian Federation (Heroin no.3)	40.0					2005	23,721.5					2006
(Heroin no.4)	57.0	10.5 -	209.4	3.0 -	27.0	2006	32,809.0	8,027.9 -	17,452.0	64.0 -	95.0	2006
Ukraine	85.0	70.0 -	100.0			2006						
Southeast Europe												
Albania (Heroin no.3)	22.5	20.0 -	25.0			2006	13,500.0	12,000.0 -	15,000.0			2006
Bulgaria (Heroin no.3)	43.7	33.6 -	201.6	15.0 -	91.0	2006						
Croatia	50.2	41.8 -	66.9	5.0 -	20.0	2006	23,410.0	20,070.0 -	28,430.0	20.0 -	50.0	2006
FYR of Macedonia	22.0	18.9 -	25.2			2005	13,838.4	12,580.4 -	15,096.4			2005
Romania (Heroin no.3)	50.3	31.5 -	50.3			2006	21,386.6	16,354.5 -	21,386.6			2006
Turkey	18.2	16.4 -	20.1			2006	9,435.3	9,749.8 -	10,693.3	35.0 -	80.0	2006
West and Central Europe												
Andorra	56.6	50.3 -	62.9			2005						
Austria (Heroin no.3)	69.0	50.2 -	87.8			2006	40,775.0	25,090.0 -	56,460.0	0.2 -	53.0	2006
(Heroin no.4)	106.6	100.4 -	112.9	34.0		2006	69,005.0	62,730.0 -	75,280.0	28.0 -	34.0	2006
Belgium (Heroin no.3)	32.1	16.7 -	61.0			2006	18,820.0					2006
Cyprus (Heroin no.3)	183.0					2006	28,290.0					2006
(Heroin no.4)	180.1					2006	31,784.9					2006
Czech Republic (Heroin no.3)	47.2	21.6 -	86.8	5.0 -	89.0	2006	33,828.6	17,360.9 -	52,044.9	20.0		2006
Denmark (Heroin no.3)	100.0	48.6 -	259.3			2006	35,968.0		56,730.0			2006
(Heroin no.4)	210.9	105.5 -	351.5			2006	38,664.3	6,151.1 -	79,086.1			2006
Estonia (Heroin no.4)	94.4					2006	32,079.9					2006
Finland (Heroin no.4)	125.0	75.5 -	151.0			2006	69,192.0	50,190.0 -	62,730.0			2006
France (Heroin no.3)	66.9	62.7 -	100.4	2.0 -	10.0	2006	35,550.0					2006
(Heroin no.4)	100.4	75.3 -	150.6	2.0 -	10.0	2006	50,190.0			5.0 -	25.0	2006
Germany (Heroin no.3)	46.1			0.1 -	63.0	2006	22,510.0			1.0 -	62.0	2006
Greece (Heroin no.3)	75.3	56.5 -	94.1			2006	19,450.0	12,550.0 -	26,350.0	100.0		2006
(Heroin no.4)	78.4	56.5 -	100.4			2006	25,720.0	18,820.0 -	32,620.0			2006
Hungary (Heroin no.3)	63.5	48.6 -	78.8	10.0 -	80.0	2006	16,983.5					2006
(Heroin no. 4)	65.6					2006	56,839.3					2006
Ireland (Heroin no. 3)	250.9	225.8 -	276.0	25.0 -	55.0	2006	33,967.0					2006
Italy (Heroin no. 3)	65.6	56.4 -	74.8			2006	28,830.0	25,660.0 -	32,010.0			2006
(Heroin no. 4)	97.9	86.9 -	109.0			2006	47,340.0	42,480.0 -	52,200.0			2006
Latvia	179.9	132.6 -	227.3	2.0 -	87.0	2006	94,700.0	75,760.0 -	113,640.0			2006
Liechtenstein	33.9	29.7 -	42.4			2006						
Lithuania (Heroin no.3)	54.4	36.4	87.3			2006	31,990.0	23,640.0	43,640.0			2006
Luxembourg (Heroin no.3)	102.7			5.0 -	58.0	2006	31,450.9					2005
Malta (Heroin no.3)	75.3	62.7 -	87.8	15.1 -	48.7	2006	50,190.0	43,910.0 -	53,950.0	15.1 -	48.7	2006
Netherlands	37.7	25.2 -	50.3			2005	16,625.0	15,680.0 -	17,570.0			2006
Norway	219.6	125.5 -	313.7	5.0 -	55.0	2006	53,325.0	31,370.0 -	75,280.0	5.0 -	55.0	2006
Poland	66.5	32.6 -	99.1	0.2 -	33.9	2006	28,860.0	13,170.0 -	31,370.0			2006
Portugal (Heroin no.3)	52.1					2006	34,513.0	25,090.0 -	31,370.0			2006
Slovakia	24.4	9.7 -	39.0	9.0 -	13.0	2006	16,240.0	12,990.0 -	19,490.0			2006
Slovenia (Heroin no.3)	50.3					2006	19,373.8					2006
Spain (Heroin no.3)	78.3					2006	47,370.0			47.0		2006

HEROIN
Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory
(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Sweden (Heroin no.3)	91.6	65.5 - 130.9		2006	35,971.2	26,180.0 - 39,270.0		2006
(Heroin no.4)	130.9			2006	45,792.5			2006
Switzerland	38.8	15.5 - 93.0	4.0 - 15.0	2006	21,470.0	15,500.0 - 27,130.0		2006
United Kingdom	70.8	70.8 - 106.2	31.0 - 53.0	2006	28,320.0	24,780.0 - 31,860.0	40.0 - 50.0	2006
Oceania								
Australia	310.3	155.2 - 465.5		2005	93,095.4	62,063.6 - 124,127.2		2005
New Zealand (no.4 - Imported)	1,158.9	662.3 - 1,655.6		2006				
('homebake')	114.4	65.4 - 163.4		2004				

3.4.2 Cocaine: Wholesale, steet prices and purity levels

Retail price (street price), US$/gram

EUROPE	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Austria	198	*180*	167	120	126	156	138	118	113	93	94	78	71	90	103	101	78
Belgium	*80*	90	68	95	82	93	90	57	55	60	55	51	50	51	*51*	*51*	60
Denmark	144	135	111	90	*150*	176	169	108	119	165	106	120	91	122	82	82	81
Finland	*159*	*150*	*126*	*105*	*165*	*191*	*184*	*123*	179	*157*	*138*	121	111	151	146	125	100
France	99	119	140	153	151	174	125	87	84	82	50	87	75	90	99	94	100
Germany	120	103	111	95	109	103	90	77	72	68	57	58	57	68	73	79	74
Greece	*150*	*120*	105	54	116	111	144	91	54	82	69	72	75	96	93	79	110
Iceland	167	203	207	200	211	228	226	238	149	*134*	*121*	109	150	207	156	*156*	164
Italy	108	120	164	90	104	113	129	109	129	*135*	*100*	89	90	101	113	114	104
Luxembourg	*150*	*150*	*150*	*150*	172	194	127	115	110	119	*119*	119	*107*	96	114	106	*106*
Netherlands	66	*70*	74	66	*60*	79	52	64	38	33	*33*	*33*	*33*	50	*59*	*59*	60
Norway	176	170	255	156	145	*150*	153	177	133	128	114	157	165	170	155	*155*	151
Portugal	63	57	60	57	59	66	64	57	51	43	56	48	36	47	49	55	56
Spain	110	100	100	63	78	91	72	68	68	63	52	52	56	70	76	76	76
Sweden	*160*	*152*	*183*	*123*	*148*	118	118	98	88	97	77	79	87	99	93	92	101
Switzerland	178	144	188	136	146	148	127	117	110	*109*	77	69	74	89	*86*	*86*	74
United Kingdom	131	127	69	123	113	111	102	124	128	104	94	94	84	90	91	79	87
Ireland	*141*	*137*	*120*	*110*	*100*	119	32	34	32	30	*28*	*28*	*94*	79	87	88	88
Average unweighted in US$	133	129	133	110	124	134	119	103	95	95	80	81	84	98	96	93	93
Inflation adjusted in 2006 US$	**206**	**191**	**191**	**154**	**169**	**178**	**153**	**130**	**117**	**114**	**94**	**92**	**94**	**108**	**102**	**96**	**93**
Weighted average US$	117	115	118	104	112	118	105	92	92	88	70	74	72	84	88	87	86
Inflation adjusted in2006 US$	**181**	**170**	**169**	**145**	**152**	**157**	**135**	**116**	**113**	**106**	**82**	**85**	**80**	**92**	**94**	**89**	**86**
Weighted average in Euro	92	93	91	89	94	91	83	81	82	82	76	83	76	74	71	70	69
Inflation adjusted in 2006 €	**135**	**130**	**122**	**115**	**119**	**112**	**100**	**96**	**96**	**95**	**86**	**92**	**82**	**79**	**74**	**73**	**70**

Sources: UNODC ARQ data, EUROPOL and UNODC estimates (in italics)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007 *
USA	184	177	170	147	137	131	126	127	124	118	129	98	86	75	87.3	96.0	94.0	122
Inflation adjusted in 2006 US$	**284**	**262**	**245**	**205**	**186**	**174**	**162**	**159**	**154**	**142**	**151**	**111**	**96**	**82**	**93**	**99**	**94**	**119**

Sources: ONDCP 1990-2000 (prices for 1 gram or less, at street purity), ONDCP, ONDCP, The Price & Purity of Illicit Drugs 1981-2003 (prices for < 2 grams) for 2001-03, Community Epidemiology Network - June 2005 (for 2004) and ONDCP (based on STRIDE) for 2005 to 2007.

* Preliminary data

Wholesale price, US$/kg

EUROPE	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Austria	*66,000*	*66,000*	54,000	40,000	41,946	52,084	45,875	56,723	54,440	38,859	47,094	43,995	42,385	59,300	55,894	59,757	50,185
Belgium	*25,000*	24,000	38,250	28,000	26,920	30,560	21,927	17,025	19,167	23,859	22,376	26,771	28,111	29,610	32,480	*32,480*	32,480
Denmark	*80,000*	85,000	85,000	82,500	58,516	60,034	46,141	38,640	44,517	78,900	43,462	47,839	37,823	53,160	45,896	50,321	40,520
Finland	*79,500*	75,000	*62,750*	*52,500*	*82,500*	*95,450*	*91,750*	*61,550*	*89,350*	*78,460*	*68,321*	*59,492*	*51,804*	62,150	68,315	*68,315*	*56,611*
France	117,000	38,250	45,000	38,250	40,000	39,877	48,077	43,554	42,159	27,714	*27,000*	34,978	37,676	45,200	49,683	50,321	50,190
Germany	69,000	53,100	60,300	54,142	57,692	54,676	53,925	45,294	41,210	39,639	33,752	33,235	34,476	40,110	44,243	46,525	45,320
Greece	*75,000*	*90,000*	95,000	36,000	46,413	53,098	72,015	43,795	49,180	49,320	41,237	40,359	42,385	53,680	57,446	62,902	62,735
Italy	54,000	48,000	94,000	41,935	51,097	51,455	55,633	50,629	49,091	47,250	*46,000*	40,529	41,412	47,440	51,759	52,188	52,920
Luxembourg	*93,919*	95,939	113,521	50,847	157,593	141,343	47,625	43,103	41,072	47,718	*47,718*	*47,718*	*47,718*	*47,718*	31,052	31,450	31,450
Netherlands	26,500	*28,000*	29,500	26,500	24,680	33,232	23,894	29,698	22,355	27,500	*27,500*	*27,500*	*27,500*	27,400	33,775	*33,775*	35,000
Norway	120,000	*120,000*	127,500	*110,000*	39,971	*50,000*	41,670	60,028	81,699	57,545	51,417	51,569	54,159	56,500	65,209	*65,209*	56,460
Portugal	39,500	39,285	33,000	27,000	27,950	34,483	42,591	37,908	33,447	30,000	*28,000*	29,080	*31,046*	32,410	36,399	*36,399*	31,365
Spain	65,000	60,000	55,000	35,000	36,434	41,322	38,760	36,806	38,924	38,898	30,882	38,898	31,511	38,830	42,167	41,321	41,210
Sweden	*80,000*	*85,000*	*91,375*	*61,450*	*73,825*	55,556	59,255	45,573	50,484	48,508	38,394	34,693	35,763	43,130	39,560	40,068	39,270
Switzerland	63,900	94,250	116,250	50,847	72,012	75,949	51,587	40,780	41,152	*41,000*	35,482	23,392	19,274	37,230	44,008	*44,008*	41,090
United Kingdom	47,850	46,475	20,625	43,210	*45,000*	46,774	40,625	47,500	47,500	33,981	38,168	36,008	35,848	40,880	50,036	*50,036*	50,943
Ireland	45,000	*45,000*	*40,000*	*50,000*	*45,000*	*42,000*	31,646	33,733	31,530	29,891	*29,891*	*29,891*	*29,891*	30,510	*33,580*	*33,986*	*33,909*
Average unweighted in US$	67,481	64,312	68,298	48,717	54,562	56,347	47,823	43,079	45,722	43,473	38,629	37,997	36,987	43,839	45,971	47,004	44,215
Inflation adjusted in 2006 US$	**104,096**	**95,222**	**98,167**	**67,940**	**74,187**	**74,551**	**61,462**	**54,084**	**56,509**	**52,596**	**45,199**	**43,233**	**41,445**	**48,027**	**49,061**	**48,508**	**44,215**
Weighted average US$	67,793	51,895	57,392	43,998	47,040	48,150	47,754	43,975	43,434	38,491	35,580	36,095	35,950	42,322	46,863	47,726	46,939
Inflation adjusted in 2006 US$	**104,578**	**76,837**	**82,490**	**61,359**	**63,960**	**63,707**	**61,372**	**55,210**	**53,682**	**46,568**	**41,631**	**41,069**	**40,282**	**46,365**	**50,013**	**49,254**	**46,939**
Inflation adjusted (gram) in 2006 US$	**105**	**77**	**82**	**61**	**64**	**64**	**61**	**55**	**54**	**47**	**42**	**41**	**40**	**46**	**50**	**49**	**47**
Weighted in Euro (g)	**53**	**42**	**44**	**38**	**40**	**37**	**38**	**39**	**39**	**36**	**38**	**40**	**38**	**37**	**38**	**38**	**37**
Inflation adjusted in Euro (g) in 2006	**78**	**59**	**60**	**49**	**50**	**45**	**45**	**46**	**45**	**42**	**43**	**45**	**41**	**40**	**39**	**40**	**38**

Sources: UNODC ARQ data, EUROPOL and UNODC estimates (in italics)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
USA	45,430	48,300	48,100	44,730	42,180	38,640	35,700	34,320	31,960	30,870	29,580	21,500	23,000	21,500	22,066	20,500	30,500
Adjusted for inflation (kg)	**70,080**	**71,514**	**69,135**	**62,380**	**57,351**	**51,124**	**45,881**	**43,088**	**39,500**	**37,348**	**34,611**	**24,463**	**25,772**	**23,554**	**23,549**	**21,156**	**30,500**
Adjusted for inflation (gram)	**70**	**72**	**69**	**62**	**57**	**51**	**46**	**43**	**40**	**37**	**35**	**24**	**26**	**24**	**24**	**21**	**31**

Sources: ONDCP 1990-2000 (prices for 10-100 gram, at street purity), UNODC ARQ 2001-2005 (mid-point of min/max prices).

COCAINE
Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory
(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Africa								
East Africa								
Kenya	32.3	25.8 - 38.8		2004	45,208.0	38,749.7 - 51,666.2	40.0 - 50.0	2004
North Africa								
Algeria	18.1	16.7 - 19.5		2006				
Egypt	78.7	69.9 - 87.4		2006	59,930.0	51,370.0 - 68,490.0		2005
Morocco	7.0			2007				
Southern Africa								
Namibia	81.3	73.2 - 81.3	10.5 - 33.0	2006	68,119.9			2004
(Crack)	16.3	14.6 - 16.3	8.7 - 19.0	2006	15,137.8		70.0	2004
South Africa	46.8			2006				
(Crack)	9.2			2006				
Zambia	35.4			2004	35,381.4	33,898.3 - 37,076.3		2004
Zimbabwe	7.4	5.0 - 9.9		2006				
West and Central Africa								
Burkina Faso (Coca Base)	55.3	46.1 - 64.5		2006				
Cameroon	29.9			2005				
Congo R.(Coca Base)	6.0	6.0 - 10.0		2005	3,708.1	1,854.1 - 3,708.1		2004
Gabon	92.2	64.5 - 129.0		2006	92,710.0			2006
Ghana	18.8		2.0 - 5.0	2005	16,500.0	15,000.0 - 18,000.0	70.0 - 96.0	2004
Guinea	20.0	18.0 - 22.0		2006	20,000.0	18,000.0 - 22,000.0		2006
Nigeria	26.5	17.7 - 35.3		2006	19,610.0	17,650.0 - 26,470.0		2006
Togo	29.9	29.9 - 33.9		2005				
Americas								
Caribbean								
Anguilla	17.5	15.0 - 20.0		2005	17,500.0	15,000.0 - 20,000.0		2005
Bahamas	20.0	20.0 - 50.0		2004	9,000.0	9,000.0 - 15,000.0		2004
(Crack)	5.0	5.0 - 10.0		2004				
Dominica	57.5	55.0 - 60.0		2004	38,000.0	35,000.0 - 50,000.0	80.0 - 98.0	2005
(Crack)	55.0		60.0 - 98.0	2005				
Dominican R.	7.8			2005	6,570.0			2006
Grenada	36.9	33.2 - 44.3		2005	9,223.4	8,116.6 - 9,961.2		2005
(Crack)	33.2	29.5 - 36.9		2005				
Haiti	10.0	8.0 - 12.0		2004	6,500.0	5,000.0 - 8,000.0		2004
Jamaica (Coca base)					5,795.0	5,410.0 - 6,180.0		2006
(Crack)					5,795.0	5,410.0 - 6,180.0		2006
Montserrat (Coca Base)	59.0	55.9 - 62.1		2004	8,880.9	8,197.7 - 9,564.0		2004
St. Lucia	9.3	7.5 - 11.2		2004	21,115.4	24,841.6 - 31,052.0		2004
St. Vincent & Grenadines					5,534.0	5,534.0 - 7,378.7		2005
Trinidad Tobago	63.9			2006	6,390.0			2006
Turks and Caicos Islands	20.0	10.0 - 30.0		2006	9,000.0	8,000.0 - 10,000.0		2006
(Crack)	10.0			2005				
Central America								
Belize	7.5	7.5 - 12.5	90.0 - 96.0	2005	6,015.0	5,012.5 - 7,518.8	90.0 - 96.0	2004
(Crack)	14.7	12.2 - 14.7		2006	30,000.0	30,000.0 - 35,000.0		2004
Costa Rica	14.0	12.0 - 16.0		2006	6,500.0	6,000.0 - 7,000.0		2006
(Crack)	9.0	6.0 - 12.0		2006				
El Salvador	24.0	23.0 - 25.0		2006	24,000.0	23,000.0 - 25,000.0		2006
(Crack)	24.0	23.0 - 25.0		2006	24,000.0	23,000.0 - 25,000.0		2006
Guatemala	13.1		30.0 - 40.0	2006	13,110.0		87.0 - 98.0	2006
(Crack)	9.8		15.0 - 25.0	2006	9,830.0		35.0 - 75.0	2006
Honduras	7.6			2006	10,473.0	8,950.0 - 15,000.0	90.0 - 96.0	2005
(Crack)	5.3	2.6 - 7.9	35.0 - 50.0	2005				
Panama	2.0		1.0 - 100.0	2005	2,500.0			2005
(Crack)	1.0		1.0 - 100.0	2005	2,500.0		50.0 - 60.0	2005
North America								
Canada	70.2	52.6 - 140.4	99.0	2006	31,580.0	23,680.0 - 38,600.0	79.0	2006
(Crack)	131.6	87.7 - 175.4	37.0 - 97.0	2006	25,806.5	24,193.6 - 32,258.1	39.0 - 100.0	2005
Mexico					8,000.0		90.0	2006
United States	94.0	13.0 - 350.0	71.0	2006	30,500.0	9,000.0 - 52,000.0		2006
(Crack)	106.0	12.0 - 200.0		2006	22,500.0	13,000.0 - 32,000.0		2006

COCAINE

Retail and wholesale prices and purity levels: breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
South America								
Argentina	5.9	3.5 - 8.3		2004	4,800.0	2,600.0 - 7,000.0		2004
Bolivia	9.0		90.0	2005	1,300.0			2005
Brazil	12.0	10.0 - 13.0	15.0 - 36.0	2005	3,000.0	2,000.0 - 7,000.0	80.0 - 98.0	2005
(Crack)	6.0	3.0 - 8.0		2005	2,000.0	1,500.0 - 3,000.0		2005
Chile	41.3	28.3 - 56.6		2006	6,750.0	6,500.0 - 7,000.0		2006
(Coca Base)	9.3	7.6 - 9.5		2006	2,500.0	2,000.0 - 3,000.0		2006
Colombia	2.0			2005	1,762.0		87.0 - 95.0	2006
(Coca Base)					879.0			2004
Ecuador					4,000.0	3,000.0 - 4,500.0		2006
(Coca Base)	2.0	1.0 - 3.0		2006	1,900.0	1,800.0 - 2,000.0		2006
Guyana	5.0			2005	4,900.0	4,600.0 - 5,000.0		2005
(Crack)	4.5			2005	4,500.0	4,400.0 - 4,600.0		2005
Paraguay					6,930.0			2004
Peru	4.5			2006	700.0			2006
(Coca Base)	1.0			2006	1,100.0			2006
Uruguay	10.0			2006	6,000.0	5,000.0 - 7,500.0		2006
(Coca Base)	2.0	1.5 - 2.5		2006	1,800.0	1,600.0 - 2,000.0		2006
(Crack)					3,000.0	2,800.0 - 3,400.0		2006
Venezuela	9.3	7.0 - 11.6		2006	4,190.0	5,120.0 - 6,980.0	85.0 - 90.0	2006
(Crack)	1.2	0.9 - 1.9		2006	700.0	930.0 - 1,160.0		2006
Asia								
East and South-East Asia								
Hong Kong SAR, China	101.8	76.7 - 117.4		2006	38,640.0	32,820.0 - 46,980.0		2006
Indonesia	111.7	106.4 - 117.0		2006				
Japan	137.9			2006	46,380.0			2004
Malaysia					53,620.0			2006
Philppines	102.0			2006	90,661.8			2005
Thailand	53.6	63.7 - 76.4		2006	44,590.0	38,220.0 - 50,960.0		2006
Near and Middle East /South-West Asia								
Bahrain	159.1	132.6 - 185.6		2005				
Iran	126.3			2005				
Israel	100.0	70.0 - 120.0		2006	80,000.0	50,000.0 - 90,000.0		2006
Jordan	77.2	84.3 - 98.3		2005	66,008.5	77,110.0 - 91,130.0		2005
Lebanon	60.0	40.0 - 80.0	70.0 - 80.0	2006	84,120.0	50,000.0 - 80,000.0		2006
Syrian Arab Republic (Coca Base)	100.0	80.0 - 120.0	50 (40-60)	2006	60,000.0	50,000.0 - 70,000.0	70 (60-80)	2006
Europe								
East Europe								
Belarus	123.0	110.0 - 135.0		2005	60,000.0			2005
Moldova R.	138.0	125.5 - 150.6		2006	100,000.0	80,000.0 - 120,000.0		2005
Russian Federation	159.0	78.5 - 279.2	38.0 - 54.0	2005	107,309.1	61,082.0 - 244,328.1	62.0 - 81.0	2005
Southeast Europe								
Albania	70.0	60.0 - 80.0		2005	46,000.0	43,000.0 - 49,000.0		2006
Bulgaria	84.0	53.8 - 235.2	15.0 - 91.0	2005	109,207.0	30,241.9 - 188,172.0	15.0 - 91.0	2006
Croatia	92.0	83.6 - 100.3	20.0 - 40.0	2006	46,820.0	41,810.0 - 54,350.0	40.0 - 80.0	2006
FYR of Macedonia	50.3	37.7 - 62.9		2005	34,596.0	31,450.9 - 37,741.1		2005
Romania	113.2			2005	62,901.8	44,031.3 - 62,901.8		2006
Serbia and Montenegro	74.5	62.1 - 87.0		2004	49,683.3	37,262.5 - 62,104.0		2004
Turkey	113.2	100.6 - 125.8		2005	8,177.2	84,917.4 - 94,352.7		2006
West and Central Europe								
Andorra	69.2	62.9 - 75.5		2005				
Austria	78.4	62.7 - 94.1		2006	50,185.0	37,640.0 - 62,730.0	1.0 - 94.0	2006
Belgium	59.6	50.2 - 69.0	1.2 - 82.1	2006	32,480.4			2006
Cyprus	201.3			2006	39,170.0			2006
Czech Republic	98.2	65.0 - 130.1	12.0 - 100.0	2006	76,249.6	65,040.5 - 99,762.2	12.0 - 100.0	2006
(Coca Base)	85.7			2006	51,293.0			2004
Denmark	81.0	4.9 - 113.5		2006	40,520.0	3,240.0 - 64,830.0		2006
Estonia	75.5			2006	29,878.4			2006
Finland	100.6	75.5 - 125.8		2006	56,611.6	50,321.4 - 62,901.8	13.0 - 78.0	2006
France	100.4	75.3 - 150.6	2.0 - 10.0	2006	50,190.0	31,370.0 - 62,730.0	20.0 - 80.0	2006
(Crack)	72.3			2006				
Germany	74.2		0.5 - 1.0	2006	45,320.0		20.3 - 98.8	2006
(Crack)	69.0			2006				

COCAINE

Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Greece	109.8	94.1 - 125.5		2006	62,735.0	50,190.0 - 75,280.0	50.2	2006
Hungary	77.4	57.7 - 110.4	10.0 - 80.0	2006	46,674.4			2006
(Crack)	63.9	97.0 - 137.4		2006				
Iceland	163.5			2006				
Ireland	87.8	75.3 - 112.9	10.0 (3-27)	2006				
Italy	103.9	90.9 - 116.9		2006	52,920.0	47,080.0 - 58,770.0		2006
Latvia	80.5	66.3 - 94.7	22.0 - 66.0	2006	66,046.9			2006
Lithuania	72.0	58.2 - 90.9		2006	34,540.0	32,620.0 - 36,360.0		2006
Luxembourg	115.3	25.2 - 151.0	28.0 - 95.0	2006	31,450.9			2006
Malta	87.8	75.3 - 100.4	26.7 - 65.8	2006	72,770.0	63,990.0 - 81,550.0	26.7 - 65.8	2006
Netherlands	62.9	50.3 - 75.5		2005	30,821.9	28,934.8 - 32,708.9		2005
Norway	150.6	112.9 - 188.2	20.0 - 70.0	2006	56,460.0	37,640.0 - 75,280.0	20.0 - 70.0	2006
Poland	61.5	38.9 - 82.8		2006	37,640.0	24,720.0 - 50,190.0	20.0 - 88.0	2006
(Crack)	94.4	88.1 - 100.6		2006				
Portugal	55.5			2006	31,365.0	30,110.0 - 32,620.0		2006
Slovakia	58.5	42.2 - 74.7	30.0 - 40.0	2006	48,720.0	32,480.0 - 64,960.0	40.0 - 70.0	2006
Slovenia	64.2			2006	37,929.8			2006
Spain	76.0		53.0	2006	41,210.7		75	2006
Sweden	100.7	52.4 - 130.9		2006	39,270.0	39,270.0 - 52,360.0		2006
Switzerland	73.6	27.1 - 116.3		2006	41,090.0	23,260.0 - 62,020.0		2006
United Kingdom	86.7	70.8 - 106.2	1.0 - 99.0	2006	28,000.0	22,000.0 - 31,000.0	29.0 - 78.0	2006
(Crack)	35.9	9.4 - 150.9	6.0 - 99.0	2006	50,943.4	33,962.3 - 67,924.5	48.0 - 89.0	2006
OCEANIA								
Australia	277.0			2007	103,500.0	92,000.0 - 115,000.0		2007
New Zealand	281.5	165.6 - 397.4		2006				

3.4.3 Cannabis: Wholesale, steet prices and purity levels

CANNABIS HERB

Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Africa								
East Africa								
Eritrea	3.3	3..33 - 4.3	5.0	2005	400.0	400.0 - 466.7		2005
Kenya	0.2	0.1 - 0.3		2004	96.9	64.6 - 129.2		2004
Madagascar	0.02	0.02 - 0.1	2.0 - 10.0	2005	15.1	18.9 - 25.2	2.0 - 10.0	2005
Rwanda	0.13	0.1 - 0.2		2004				
Seychelles								
Uganda	0.06	0.09 - 0.1		2005	150.0	100.0 - 200.0		2005
North Africa								
Egypt	2.6	1.8 - 3.5		2006	50.0	40.0 - 60.0		2006
Southern Africa								
Malawi	0.16	0.12 - 0.20	35.0 - 65.0	2006	10.0		40.0 - 60.0	2006
Namibia	0.5	0.3 - 0.8		2006	45.4	53.0 - 68.1		2004
South Africa	0.2			2006	22.7	15.1 - 30.3		2004
Swaziland	0.1			2006				
Zambia	0.3	0.3 - 0.3		2006	230.0	210.0 - 240.0		2006
Zimbabwe	0.1	0.1 - 0.1		2006	10.0			2006
West and Central Africa								
Burkina Faso	0.2	0.2 - 0.5		2006	10.0			2006
Cameroon	0.02	0.0 - 0.1		2006				
Central African Rep.	0.09			2006	10.0			2006
Congo Rep.	0.2	0.2 - 0.4	100.0	2004	29.9	23.2 - 29.9		2005
Gabon	1.8	0.9 - 3.7		2006	150.0	110.0 - 180.0	3.0 - 7.0	2006
Ghana	0.8	0.4 - 1.1		2007	13.6	10.9 - 16.3		2007
Guinea	0.01	0.01 - 0.02		2006	10.0	10.0 - 20.0		2006
Niger	0.03	0.03 - 0.04		2006				
Nigeria	2.12	2.0 - 2.3	100.0	2006	20.0		100.0	2006
Togo	0.04	0.03 - 0.1		2006				
Americas								
Caribbean								
Anguilla	12.5	10.0 - 15.0		2005	12,500.0	10,000.0 - 15,000.0		2005
Bahamas	5.0	5.0 - 10.0		2004	1,800.0	1,800.0 - 2,200.0		2004
Bermuda	124.1			2006				
Dominica	32.5	25.0 - 40.0		2005	2,150.0	1,800.0 - 2,500.0		2005
Dominican Rep.	0.4			2006	250.0			2005
Grenada	1.8	1.1 - 3.0		2005	295.2	221.4 - 442.7		2005
Haiti	0.6	0.5 - 0.6		2004	55.0	50.0 - 60.0		2004
Jamaica					102.0	50.0 - 150.0		2006
Montserrat	25.1	24.0 - 25.8		2006	420.0	410.0 - 440.0		2006
St. Lucia	3.7	3.7 - 5.6		2004	298.5	559.7 - 671.6		2004
St. Vincent & Grenadines					368.9	295.2 - 442.7		2005
Trinidad Tobago	1.6			2006	1,600.0			2006
Turks & Caicos Islands	10.0	10.0 - 15.0		2006	700.0	600.0 - 900.0		2006
Central America								
Belize	0.2	1.0 - 2.5		2006	7,340.0	6,360.0 - 7,340.0		2006
Costa Rica	6.0	4.0 - 8.0		2006	315.0	280.0 - 350.0		2006
El Salvador	1.0	1.0 - 1.1		2006	1,020.0	1,000.0 - 1,050.0		2006
Guatemala	0.1		100.0	2006	100.0		100.0	2005
Honduras	0.5			2006	92.6	69.5 - 115.8		2005
Panama	10.0		100.0	2005	50.0		100.0	2005
North America								
Canada	15.8	8.8 - 21.9	23.0	2006	4,830.0	1,160.0 - 7,740.0	10.2	2006
Mexico					80.0		100.0	2006
United States	15.0	10.0 - 25.0	2.0 - 13.0	2006	2,000.0	360.0 - 14,300.0	4.0 - 13.0	2006
South America								
Argentina	1.3	1.0 - 1.6		2004	400.0	300.0 - 500.0		2005
Bolivia	1.2		100.0	2005	145.0		100.0	2005
Brazil	0.3	0.3 - 0.8	80.0 - 90.0	2005	150.0	100.0 - 180.0	4.0	2005
Chile	4.6	3.5 - 7.0		2006	1,000.0	800.0 - 1,500.0		2006
Colombia	0.4			2005	40.3			2005
Ecuador	1.0	1.0 - 2.0		2006	450.0	400.0 - 500.0		2006
Guyana	0.5			2005	440.0	435.0 - 445.0		2005
Paraguay					30.0			2004
Uruguay	1.2	0.9 - 1.5		2006	150.0	130.0 - 180.0		2006
Venezuela	1.9	1.4 - 2.3		2006	90.0	120.0 - 160.0		2006

CANNABIS HERB

Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Asia								
Central Asia and Transcaucasia								
Armenia	2.0	3.0 - 5.0		2006	1,500.0			2005
Georgia	2.5	2.0 - 3.0		2006				
Kazakhstan	2.5			2004	578.0	30.0 - 1,000.0		2007
Kyrgyzstan	0.45	0.40 - 0.50		2006	60.0	50.0 - 70.0		2006
Tajikistan				2004	140.0	117.0 - 161.0		2004
Turkmenistan	1.0	1.5 - 2.0		2006	45.0	40.0 - 50.0		2006
Uzbekistan	2.8	0.5 - 5.0		2006	700.0	200.0 - 1,200.0		2006
East and South-East Asia								
Brunei Darussalam	62.5			2006				
China	0.8	0.6 - 1.2		2004				
Hong Kong SAR, China	8.9	4.4 - 12.0		2006	1,750.0	1,420.0 - 2,300.0		2006
Indonesia	0.2	0.2 - 0.3		2006				
Japan	56.0	25.9 - 86.2		2006	17,240.0			2006
Laos					14.0	14.0 - 16.0		2004
Macau SAR, China	12.0	10.0 - 15.0		2006	2,350.0	2,200.0 - 2,500.0		2006
Malaysia					423.0	160.0 - 686.0		2006
Myanmar	0.2	0.1 - 0.2		2006	130.0	100.0 - 160.0		2006
Philippines	0.5	0.4 - 0.9		2005	453.3	362.7 - 906.6	100.0	2005
Republic of Korea	6.5	2.1 - 12.5		2006	1,040.0			2006
Singapore	20.4			2006	2,255.2	1,840.5 - 2,670.0		2006
Thailand	0.4	0.2 - 0.5		2006	150.0	100.0 - 200.0		2006
Near and Middle East /South-West Asia								
Israel	3.0			2006	130.0	50.0 - 180.0		2006
South Asia								
Bangladesh	0.2	0.2 - 0.3	6.0 - 8.0	2006	118.0	103.0 - 133.0	6.0 - 7.0	2006
India					85.0	50.0 - 125.0		2006
Sri Lanka	0.070	0.06 - 0.07		2006				
Europe								
East Europe								
Belarus	3.0	1.0 - 7.5		2005	1,400.0	550.0 - 2,000.0		2005
Moldova R.	1.6	1.2 - 2.4		2005				
Russian Federation	5.0	3.8 - 6.3		2006	1,940.0	3,490.4 - 8,586.4	1.0 - 3.0	2006
Southeast Europe								
Albania	1.0	1.0 - 1.5		2006	115.0	100.0 - 130.0		2006
Bulgaria	1.0	0.9 - 1.2		2004				
Croatia	2.5	1.7 - 3.3		2006	564.2	520.8 - 607.6		2005
FYR of Macedonia	1.6	1.3 - 1.9		2005	670.0	590.0 - 750.0		2005
Romania	8.8	6.3 - 12.6		2006	881.0			2005
Serbia and Montenegro	4.3	2.5 - 6.2		2004	105.6	87.0 - 124.2		2004
Turkey	7.6	2.5 - 5.0		2006	440.3	377.4 - 503.2		2006
West & Central Europe								
Andorra	7.6			2005				
Austria	4.4	3.8 - 5.0	27.0	2006	1,069.3	880.6 - 1,258.0	19.0	2006
Belgium	6.9	4.1 - 11.0		2006	3,210.0	2,030.0 - 4,390.0		2006
Cyprus	18.3			2006	3,260.0			2006
Czech Republic	7.3	0.9 - 15.2	21.0	2006	4,428.3	880.6 - 10,819.1	11.0	2006
Estonia	10.1			2006	2,830.6			2006
Finland	22.0	18.9 - 25.2	3.2 (0.1-14)	2006	11,322.3		14.0	2006
France	7.6	6.3 - 8.8		2006	3,145.1	2,641.9 - 5,032.1	2.0 - 16.0	2006
Germany	10.3		0.1 - 7.2	2006	4,690.0			2006
Greece	4.1	1.9 - 6.3		2006	630.0	380.0 - 880.0		2006
Hungary	10.3	7.7 - 12.3	0.02 - 12.0	2006	2,780.3			2005
Iceland								
Ireland	6.3	2.5 - 7.5		2006				
Italy	7.4	6.6 - 8.1		2006	1,450.0	1,200.0 - 1,710.0		2006
Latvia	18.9			2006	5,681.8			2006
Liechtenstein	6.8	5.1 - 8.5		2006				
Lithuania	12.0	7.3 - 16.0		2006	5,020.0	3,630.0 - 7,260.0		2006
Luxembourg	9.2		1.0 - 22.0	2006	4,403.1	3,774.1 - 5,032.1		2005
Malta	16.3	12.6 - 20.1	4.3 - 6.4	2006	8,660.0	7,900.0 - 9,410.0	5.3 - 24.4	2006
Netherlands (Nederwiet)	10.0			2007	3,270.9	2,641.9 - 3,899.9		2005
Norway								

CANNABIS HERB

Retail and wholesale prices and purity levels: breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Poland	2.5	1.5 - 3.9	0.2 - 4.2	2006	5,140.0	3,260.0 - 9,910.0		2006
Portugal	4.0			2005	565.0	440.0 - 690.0		2006
Slovakia	8.1	6.5 - 13.0	13.0 - 25.0	2006	2,435.0	1,620.0 - 3,250.0		2006
Slovenia	6.9			2006	1,346.1			2006
Spain	3.5			2006	2,059.4			2006
Sweden	11.5	8.6 - 14.4		2006				
Switzerland	6.4	3.4 - 17.0	1.0 - 25.0	2006	4,661.0	2,118.6 - 8,474.6		2006
United Kingdom	5.0			2006	2,743.8	943.4 - 4,717.0		2006
Oceania								
Australia	27.2	11.3 - 45.1		2006	5,042.7	3,879.0 - 6,206.4		2004
Marshall Isl.					575.0	500.0 - 650.0		2004
New Zealand	14.9	13.3 - 16.6		2005	6,071.4	5,000.0 - 7,142.9	3.0	2005

CANNABIS OIL

Retail and wholesale prices and purity levels: breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Americas								
Caribbean								
Anguilla	12.5	10.0 - 15.0		2005	12,500.0	10,000.0 - 15,000.0		2005
Bahamas	35.0	20.0 - 50.0		2004	4,000.0	3,000.0 - 5,000.0		2004
Jamaica					150.0	150.0 - 310.0		2006
North America								
Canada	21.9	8.8 - 43.9	25.0 - 51.0	2006	920.0	580.0 - 1,930.0	25.0 - 51.0	2006
Asia								
East and South-East Asia								
Philippines					3,989.1			2005
South Asia								
Maldives	76.9			2006	76,930.0			2006
Near and Middle East /South-West Asia								
Jordan					8,410.0	7,710.0 - 9,110.0		2006
Europe								
Southeast Europe								
Albania					1,250.0	1,000.0 - 1,500.0		2005
West and Central Europe								
Spain	13.2			2005	2,724.9			2005
Oceania								
New Zealand	89.3	35.7 - 142.9		2005	89,285.7	35,714.3 - 142,857.1		2005

CANNABIS RESIN

Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Africa								
East Africa								
Eritrea	6.7	6.7 - 10.0	2.0 - 10.0	2005	666.7	666.7 - 800.0		2005
Kenya	0.9	0.8 - 1.0		2004				
Madagascar	0.3	0.1 - 0.4		2004	125.8	88.1 - 188.7		2005
North Africa								
Algeria	2.1	1.4 2.8		2006				
Egypt	2.6	1.7 - 3.4		2005	2,740.0	1,370.0 - 4,110.0		2005
Libya	15.4	6.9 24.0		2005	1,378.0	1,181.1 - 1,574.8		2005
Southern Africa								
South Africa	14.8			2006				
Zambia	0.6			2006	550.0	530.0 - 560.0		2006
West and Central Africa								
Congo Rep.	0.3	0.3 - 0.5		2004	27.8	37.1 - 46.4		2004
Americas								
Caribbean								
Bahamas	20.0	20.0 - 50.0		2004				
Bermuda					13,130.0	10,940.0 15,320.0		2006
Turks & Caicos Islands	15.0			2004	800.0	600.0 - 900.0		2004
North America								
Canada	14.9	8.8 - 26.3		2006	8,720.0	2,320.0 - 19,340.0		2006
USA	100.0			2006	9,000.0	-	0.1 - 52.7	2006
South America								
Brazil	2.0	1.5 - 3.0		2005				
Colombia	1.9			2004				
Asia								
Central Asia and Transcaucasia								
Armenia	35.0	30.0 - 40.0		2006	10,000.0		85.0	2005
Georgia	9.0	8.0 - 10.0		2006				
Kazakhstan	3.5	1.5 - 7.2		2004	3,568.8	300.0 - 25,000.0		2005
Kyrgyzstan	2.3	2.0 - 2.5		2005	2,305.5	1,976.0 - 2,635.0		2006
Tajikistan	2.0	1.0 - 3.0		2006	450.0	200.0 - 800.0		2006
Turkmenistan	2.0	2.5 3.0		2006	50.0	50.0 - 60.0		2006
Uzbekistan	4.8	1.5 - 8.0		2006	1,500.0	500.0 - 2,500.0		2006
East and South-East Asia								
Hong Kong SAR, China	12.0	5.4 - 17.2		2005	1,774.2	1,290.3 - 1,935.5		2005
Indonesia	7.2	6.4 - 8.0		2006				
Japan	73.3	43.1 - 103.5		2006	5,825.2			2005
Macau SAR, China	12.0	10.0 - 15.0		2006				
Philippines	0.5			2006	453.3	362.7 - 544.0	100.0	2005
Republic of Korea	41.5	31.1 - 51.9		2006				
Near and Middle East /South-West Asia								
Afghanistan	0.05	0.04 0.1		2005	47.0	37.0 - 57.0		2005
Bahrain	106.07	79.55 - 132.6		2005	3,712.5	3,182.2 - 3,977.7		2005
Iran (Islamic Republic of)	0.5			2005	316.0			2005
Israel	6.0	3.0 - 10.0		2006	2,000.0	1,500.0 - 3,000.0		2006
Jordan	0.6	0.4 - 0.8		2005	2,240.0	1,960.0 - 2,380.0		2006
Lebanon	11.5	8.0 - 15.0	80.0 - 90.0	2006	300.0	200.0 - 400.0		2005
Oman	26.0			2005	2,075.8			2005
Pakistan	0.1			2005	92.9	80.5 - 105.3		2005
Syrian Arab Republic	1.0	0.8 - 1.2	75.0 - 95.0	2006	800.0	600.0 - 1,000.0	70.0 - 95.0	2006
United Arab Emirates	95.0	90.0 - 100.0		2006	1,650.0	1,600.0 - 1,700.0		2006
South Asia								
Bangladesh	2.2	2.1 - 2.5	7.0 - 10.0	2006	1,100.0	900.0 - 1,300.0		2006
India					550.0	370.0 - 730.0		2006

CANNABIS RESIN

Retail and wholesale prices and purity levels: breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per gram)				WHOLESALE PRICE (per kilogram)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Europe								
East Europe								
Belarus	14.0	10.0 - 17.5		2005	10,500.0	900.0 - 12,500.0		2005
Moldova R.	5.6	4.8 - 6.4		2005				
Russian Federation	12.1	1.1 - 29.7		2006	6,821.0	1,361.3 - 20,942.4		2006
Southeast Europe								
Albania					275.0	250.0 - 300.0		2006
FYR of Macedonia	2.8	1.9 - 3.8		2005	817.7	629.0 - 1,006.4		2005
Romania	7.6	5.0 - 7.6		2006	3,145.1	2,012.9 - 3,145.1		2006
Serbia and Montenegro	15.5	12.4 - 18.6		2004				
Turkey	6.3	8.8 - 7.6		2006	1,320.9	1,132.2 - 1,509.6		2006
West and Central Europe								
Austria	9.5	8.8 - 10.1	1.0 - 38.0	2006	2,830.6	2,516.1 - 3,145.1		2006
Belgium	7.8	4.5 - 13.8		2006	1,300.0	1,200.0 - 1,400.0		2006
Cyprus	22.0			2006	4,350.0			2006
Czech Republic	10.7	6.5 - 21.6	4.0 - 17.0	2006	6,164.4	2,138.7 - 10,819.1		2006
Denmark	6.5	4.1 - 16.2		2006	3,400.0	1,620.0 - 7,290.0		2006
Estonia	12.0			2006	2,830.6			2006
Finland	11.3	7.6 - 15.1		2006	3,459.6	2,516.1 - 4,403.1		2006
France	6.3	5.0 - 7.6		2006	1,887.1	1,635.5 - 2,516.1	6.0 - 16.0	2006
Germany	6.4		0.1 - 39.3	2006	2,377.0		0.1 - 21.4	2006
Greece	6.4	5.0 - 7.5		2006	1,820.0	1,130.0 - 2,510.0		2006
Hungary	10.6	8.2 - 13.1	0.2 - 4.0	2006	2,590.3			2006
Iceland	27.2			2006				
Ireland	8.8	7.5 - 12.6		2006				
Italy	9.9	9.0 - 10.8		2006	2,580.0	2,110.0 - 3,050.0		2006
Latvia	18.9	13.3 - 22.7		2006	3,984.2			2006
Liechtenstein	8.5	6.8 - 10.2		2006				
Lithuania	7.3	5.5 - 9.1		2006	3,899.9	3,170.3 - 4,629.6		2006
Luxembourg	9.2			2006	5,032.1			2005
Malta	7.5	5.0 - 10.0	5.3 - 24.4	2006	4,640.0	4,320.0 - 5,020.0	5.3 - 24.4	2006
Monaco	2.5			2005				
Netherlands	9.8	4.4 - 15.1		2005				
Norway	25.1	18.8 - 31.4		2006	3,575.0	2,130.0 - 5,020.0		2006
Poland	8.8	5.0 - 16.3		2006	4,770.0	1,630.0 - 9,910.0		2006
Portugal	2.5			2006				2006
Slovakia	14.7	9.8 - 19.5	3.0 - 29.0	2005	4,071.1	3,256.9 - 4,885.4		2005
Slovenia	12.6			2006	4,630.8	3,931.4 - 4,717.6		2006
Spain	5.4			2006	1,631.7			2006
Sweden	11.5	8.6 - 14.4		2006	4,316.6	2,877.7 - 5,755.4		2006
Switzerland	8.5	3.4 - 17.0	9.0 - 28.0	2006	4,830.5	1,694.9 - 8,474.6		2006
United Kingdom	3.7	1.7 - 13.3		2006	2,743.8			2006
Oceania								
Australia	18.5	19.4 - 38.8		2005				
New Zealand	66.2	53.0 79.5		2006				

3.4.4 Amphetamine-type stimulants: Wholesale, steet prices and purity levels

AMPHETAMINE
Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory
(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per *)						WHOLESALE PRICE (per **)					
Region / country or territory	Typical	Range	Purity	Year			Typical	Range	Purity	Year		
Americas												
South America												
Chile	10.0	6.0 - 13.0		2006								
Asia												
Near and Middle East /South-West Asia												
Bahrain	2.7	2.1 - 3.9		2005	T							
Iran (Islamic Republic of)	9.7			2005	D		3,667.0			2005		
Jordan	1.5	1.4 - 2.0		2006	T	TD	8,426.6	7,022.2 - 9,831.1		2005		
Oman	26.0		70.0	2005			25,947.7			2005		
Qatar												
Syrian Arab Republic	12.0	10.0 - 14.0		2006	D	TD	8,000.0	6,000.0 - 12,000.0		2006		
East and South-East Asia												
Indonesia	2.0	1.8 - 2.3		2005								
Malaysia							2,160.0			2006		
Myanmar							2,160.0			2006		
Thailand	82.8	76.4 - 89.2	90.0 - 99.0	2006			31,850.0	25,480.0 - 38,220.0		2006		
South Asia												
Maldives	76.9			2006			54,340.2	38,814.5 - 77,628.9		2005		
Europe												
Eastern Europe												
Belarus	30.0			2007			13,000.0	7,500.0 - 25,000.0		2005		
Moldova R.	37.6	31.4 - 43.9		2006			43,910.0	25,090.0 - 56,460.0		2006		
Southeast Europe												
Bulgaria	7.5	3.1 - 12.4	30 (10-73)	2006								
Croatia	15.1	13.4 - 16.7		2006			9,200.0	7,530.0 - 11,710.0		2006		
Romania	9.4			2006			6,290.2			2006		
Serbia and Montenegro	5.0	3.7 - 6.2		2004								
West and Central Europe												
Austria	25.2	18.9 - 31.5	1.0 - 100.0	2006			15,725.5	12,580.4 - 18,870.5	1.0 - 94.0	2006		
Belgium	10.4	6.0 - 18.8		2006			1,880.0	1,250.0 - 2,510.0		2006		
Cyprus	17.0			2004			7,416.5			2004		
Czech Republic	40.9	26.0 - 43.4	3.0 - 75.0	2006			21,638.2	21,638.2 - 34,696.6		2006		
Denmark	24.3	16.2 - 48.6		2006			11,350.0	5,670.0 - 16,210.0		2006		
Estonia	21.4			2006			2,830.6			2006		
Finland	25.2	18.9 - 31.5		2006			8,806.3	5,032.1 - 12,580.4	42.0 (0.1-93.0)	2006		
France	17.0	8.8 - 25.2		2006		TD	2,516.1	1,258.0 - 3,774.1		2006		
Germany	16.2			2006			5,160.0		0.7 - 68.4	2006		
Greece	7.5	6.3 - 8.8	7.5	2006			3,385.0	3,010.0 - 3,760.0		2006		
Hungary	14.0	11.4 - 16.3	1.0 - 45.0	2006			5,893.9			2006		
Iceland	60.2			2006								
Ireland	16.3	12.6 - 18.8		2006								
Italy	22.7	21.6 - 23.8		2006			6,060.0	5,860.0 - 6,270.0		2006		
Latvia	19.0	15.2 - 22.7	2.0 - 76.0	2006			3,787.9			2006		
Liechtenstein	10.2	8.5 - 11.9		2006								
Lithuania	10.5	2.2 - 14.5		2006			2,510.0	2,170.0 - 2,900.0		2006		
Luxembourg	6.3			2006	D							
Netherlands	12.6	6.3 - 18.9		2006								
Norway	78.4	31.4 - 125.5	20.0 - 80.0	2006			10,040.0	7,530.0 - 12,550.0	20.0 - 80.0	2006		
Poland	11.3	5.0 - 32.6	6.0 85.0	2006			2,510.0	1,510.0 - 3,890.0	80.0	2006		
Portugal	3.1			2006	D	TD	1,863.1			2006		
Slovenia	5.0			2006			4,352.8			2006		
Spain	30.3			2006			22,497.5			2006		
	6.0			2006	D							
Sweden	34.5	11.5 - 57.6		2006			10,071.9	5,755.4 - 14,388.5		2006		
Switzerland	25.4	10.2 - 42.4		2006								
United Kingdom	18.9	5.7 - 75.5	1.0 - 73.0	2006			3,584.9	1,509.4 5,660.4	4.0 - 74.0	2006		
Oceania												
Australia	209.5	31.0 - 387.9		2005			5,042.7	3,879.0 - 6,206.4		2004		
New Zealand	198.7			2006								

(*) in Gram or otherwise as indicated
(**) in Kilogram or otherwise as indicated
D : Doses unit
T : Tablets unit
TD: Thousand of doses
TT: Thousand of tablets

METHAMPHETAMINE

Retail and wholesale prices and purity levels: breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (*)							WHOLESALE PRICE (**)				
Region / country or territory	Typical	Range	Purity	Year				Typical	Range	Purity	Year	
Africa												
Southern Africa												
South Africa	48.8			2006								
Americas												
North America												
Canada	87.7	43.9 - 87.7	3.0 - 100.0	2006				11,290.3	7,661.3 - 14,516.1	2.0 - 100.0	2005	
United States	112.5	15.0 - 210.0	16.0 - 74.0	2006				31,350.0	5,500.0 - 57,200.0	37.0 - 99.0	2006	
Asia												
East and South-East Asia												
Brunei Darussalam	446.3			2006								
	18.8			2006	T							
Cambodia	1.6	1.0 - 5.0		2005	T							
China	6.0	2.4 - 9.7	20.0	2004	T			6,650.0	6,000.0 - 12,000.0		2005	
China (Hong Kong SAR)	50.1	38.5 - 56.2	91.0 - 99.0	2006				17,600.0	11,580.0 - 25,740.0		2006	
Indonesia	43.9	39.9 - 47.9		2006								
	10.0	9.5 - 11.6		2005	T							
Japan	387.9	86.2 - 689.7		2006				193,965.0	43,100.0 - 344,830.0		2006	
Laos	1.0	0.9 - 1.1		2005	T			4,000.0	3,000.0 - 5,000.0	27.0	2004	
Macau SAR, China	18.0	12.0 - 25.0		2005								
Malaysia	5.3			2005	T			40,210.0			2006	
Myanmar	4.6	1.8 - 4.6		2006				15,600.0	7,200.0 - 24,000.0		2006	
	2.0	1.8 - 2.2		2005	T							
Philippines	98.6	95.1 - 102.0		2006								
Republic of Korea	892.1	311.2 - 1,141.1		2006				12,450.0		25.6 - 98.5	2006	
Singapore	116.6	110.4 - 122.7		2006				115,950.0	113,500.0 - 118,400.0		2006	
	6.3			2006	T							
Thailand	83.3	72.0 - 94.6		2006								
	7.0	5.1 - 8.9	20.0 - 30.0	2006	T		TT	2,930.0	2,040.0 - 3,820.0		2006	
Near and Middle East /South-West Asia												
Bahrain	424.3	397.8 - 450.8		2005				39,777.3	26,518.2 - 53,036.3		2005	
South Asia												
Bangladesh	10.0			2007	T							
Europe												
East Europe												
Belarus	33.0	20.0 - 43.0		2006				14,000.0	7,500.0 - 25,000.0		2005	
Moldova R.	5.0	3.8 - 6.3		2006				6,270.0	5,020.0 - 7,530.0		2006	
West and Central Europe												
Czech Republic	44.0	17.4 - 86.8	3.0 - 86.0	2006				30,922.5	12,957.8 - 43,402.2	67.0 - 78.0	2006	
France							TD	2,484.2	1,242.1 - 3,726.3		2006	
Latvia	19.0	15.2 - 22.7	14.0 - 84.0	2006				3,787.9			2006	
Liechtenstein	8.5	6.8 - 10.2		2006								
Lithuania	14.5	14.5 - 17.1		2006				2,510.0			2006	
Norway	78.4	31.4 - 125.5	10.0 - 80.0	2006				10,040.0	7,530.0 - 12,550.0	10.0 - 80.0	2006	
Slovakia	65.0	48.7 - 81.2	4.0 - 89.0	2006				36,540.0	24,360.0 - 48,720.0	40.0 - 70.0	2006	
Spain	30.5			2006				22,367.9			2006	
Sweden	34.5	11.5 - 57.6		2006				10,071.9	5,755.4 - 14,388.5		2006	
Switzerland												
United Kingdom	53.1			2006								
Oceania												
Australia	188.8	66.0 - 295.0	33 (0.3 - 88)	2004				84,500.0	44,313.0 - 118,168.0	38 (3.7 - 77)	2004	
New Zealand	662.3	529.8 - 794.7	60.0 - 80.0	2006				253,605.0	230,550.0 - 276,660.0		2004	

(*) in Gram or otherwise as indicated

(**) in Kilogram or otherwise as indicated

D : Doses unit

T : Tablets unit

TD: Thousand of doses

TT: Thousand of tablets

ECSTASY

Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory

(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per tablet)				WHOLESALE PRICE (per thousand tablets)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
Africa								
North Africa								
Egypt	16.6	12.2 - 21.0		2006	9,615.0	6,990.0 - 12,240.0		2006
Southern Africa								
Namibia	19.5	9.8 - 19.5		2006	18,165.3			2004
South Africa	7.8			2006				
Zimbabwe	3.0	2.0 - 4.0		2006				
West and Central Africa								
Ghana	6.0	5.0 - 7.0		2004				
Americas								
Caribbean								
Bermuda	64.5	49.6 - 79.4		2006				
Dominican R.	19.0			2006	16,000.0			2005
Jamaica					20,000.0	15,000.0 - 25,000.0		2004
Central America								
Costa Rica	20.1			2006				
Guatemala	7.9		20.0 - 30.0	2006	6,550.0		25.0 35.0	2006
North America								
Canada	17.5	8.8 - 35.1	11.0 - 91.0	2006	40,322.6	38,709.7 - 48,387.1	68.0 87.0	2005
United States	25.0	20.0 - 30.0		2004	10,000.0	5,000.0 - 13,000.0		2004
South America								
Argentina					4,666.0			2004
Brazil	12.0	7.0 - 25.0		2005	15,000.0	10,000.0 - 30,000.0		2004
Chile	25.0	20.0 - 30.0		2006	17,241.4			2005
Colombia	22.6			2005				
Ecuador	20.0	20.0 - 30.0		2006	20,000.0	20,000.0 - 30,000.0		2006
Uruguay	50.0			2006	20,000.0	15,000.0 - 25,000.0		2004
Venezuela	9.4	8.1 - 11.6	100.0	2006				
Asia								
East and South-East Asia								
Brunei Darussalam	106.3			2006				
Cambodia	5.0	5.0 - 15.0		2005				
China	4.5	2.5 - 12.0		2005				
Hong Kong SAR, China	10.7	5.9 - 14.2		2005	3,354.8	1,548.4 - 5,806.5		2005
Indonesia	9.6	8.5 - 10.6		2006				
Japan	38.8	25.9 - 51.7		2006				
Republic of Korea	36.3	31.2 - 41.5		2006	2,070.0			2006
Macau SAR, China	22.0	18.0 - 31.0		2005				
Malaysia	17.4	13.4 - 21.5		2006				
Myanmar	24.0			2006				
Philippines	22.8			2006	21,758.8			2005
Singapore	18.4	15.3 - 21.5		2006	10,740.0	9,820.0 - 11,660.0		2006
Thailand	21.0	16.6 - 25.5		2006	20,385.0	15,290.0 - 25,480.0		2006
Vietnam	32.5	20.0 - 45.0		2005				
Near and Middle East /South-West Asia								
Iran (Islamic Republic of)	6.2			2005				
Israel	10.0	7.0 - 15.0		2006	6,000.0	4,500.0 - 11,000.0		2006
Europe								
East Europe								
Belarus	10.0	9.0 - 17.5		2005	5,500.0	5,000.0 - 9,000.0		2005
Moldova R.	12.6	3.8 - 31.4		2006	12,550.0	3,760.0 - 31,370.0		2006
Russian Federation	29.2	9.6 - 62.8	18.0 - 40.0	2006	16,509.0	3,490.0 - 31,414.0		2006
Southeast Europe								
Bulgaria	6.2	4.4 - 12.4	45.0	2006				
Croatia	6.7	5.0 - 8.4		2006	6,076.4	3,340.0 - 6,690.0		2006
FYR of Macedonia	11.3	10.1 - 12.6		2005	5,020.0	2,516.1 - 6,290.2		2006
Romania	18.9	16.4 - 18.9		2006	5,032.1	3,774.1 - 5,032.1		2006
Serbia and Montenegro	9.3	6.2 - 12.4		2004				
Turkey	7.6	6.3 - 8.8		2006	3,145.1	2,516.1 - 3,774.1		2006

ECSTASY
Retail and wholesale prices and purity levels:
breakdown by drug, region and country or territory
(prices expressed in US$ or converted equivalent, and purity levels in percentage)

	RETAIL PRICE (per tablet)				WHOLESALE PRICE (per thousand tablets)			
Region / country or territory	Typical	Range	Purity	Year	Typical	Range	Purity	Year
West and Central Europe								
Andorra	6.3	3.8 - 7.6		2005				
Austria	15.7	12.6 - 18.9	1.0 - 100.0	2006	7,862.7	6,290.2 - 9,435.3	2.0 - 100.0	2006
Belgium	6.8			2006	1,428.4			2006
Cyprus	18.3			2006	4,350.0			2006
Czech Republic	9.2	3.5 - 21.6	84.0	2006	4,906.3	1,736.1 - 8,680.5		2006
Denmark	6.5	3.2 - 16.2		2006	4,050.0	2,430.0 - 6,480.0		2006
Estonia	7.9			2006	1,572.5			2006
Finland	20.1	15.1 - 25.2		2006	5,589.4	4,968.3 - 6,210.4		2006
France	8.8	6.3 - 11.3		2006	2,201.6	1,258.0 - 3,145.1		2006
Germany	8.3		0.3 - 84.0	2006	2,440.0		0.8 - 57.0	2006
Greece	25.1	18.8 - 31.4		2006				
Hungary	6.0	3.6 - 8.4	2.0 - 40.0	2006	1,510.9			2006
Iceland	33.8			2006				
Ireland	12.6	7.5 - 15.1		2006				
Italy	32.0	29.1 - 34.9		2006	4,770.0	4,010.0 - 5,520.0		2006
Latvia	7.6	5.7 - 9.5	8.0 - 94.0	2006	3,314.4	1,893.9 - 4,734.9		2006
Liechtenstein	12.7	8.5 - 17.0		2006				
Lithuania	4.4	2.9 - 5.5		2006	1,440.0	1,080.0 - 1,810.0		2006
Luxembourg	6.3			2006				
Malta	12.6	8.8 - 16.3		2006	5,770.0	5,270.0 - 6,270.0		2006
Netherlands	4.4	2.5 - 6.3		2005	754.8	251.6 - 1,006.4		2005
Norway	43.9		20.0 - 70.0	2006	12,545.0	11,290.0 - 13,800.0	20.0 - 50.0	2006
Poland	3.8	1.3 - 10.0		2006	950.0	500.0 - 2,260.0		2006
Portugal	5.0			2006	1,065.0	750.0 - 1,380.0		2006
Slovakia	8.1	6.5 - 9.7		2006	5,178.1			2005
Slovenia	6.3			2006	1,887.1			2006
Spain	12.4			2006				
Sweden	14.4	7.2 - 21.6		2006	4,028.8	2,158.3 - 5,755.4		2006
Switzerland	17.0	8.5 - 33.9	23.0 - 52.0	2006				
United Kingdom	7.5	0.5 - 37.7	3.0 - 93.0	2006	1,829.2			2006
Oceania								
Australia	25.2	5.3 - 45.1		2006	16,851.0	11,078.0 - 30,000.0	46 (3.7 - 77.1)	2004
New Zealand	36.4	16.6 - 56.3		2006				

3.5 Consumption

3.5.1 Annual Prevalence

3.5.1.1 Opiates

OPIATES
Annual prevalence of abuse as percentage of the population aged 15-64 (unless otherwise indicated)

EUROPE	
Western and Central Europe	
Estonia, 2004	1.5
Luxembourg, 2000	0.9
Latvia, (Riga), 2003	0.9
United Kingdom, 2005	0.9
Italy, 2005	0.8
Portugal, 2000	0.7
Lithuania*, 2002/4	0.6
Switzerland, 2000	0.6
Malta, 2005	0.6
Denmark, 2001	0.5
Slovenia, 2001	0.5
Austria, 2004	0.5
Ireland, 2001	0.5
Slovakia, 2005	0.4
France, 1999	0.4
Belgium,1997	0.4
Iceland, 2005	0.4
Hungary, (18-54), 2003	0.4
Norway, 2005	0.3
Netherlands, 2005	0.3
Greece, 2004	0.3
Germany, 2004	0.3
Spain, 2002	0.2
Finland*, 2005	0.2
Liechtenstein*, 2005	0.2
Poland, 2003	0.2
Czech Rep., 2005	0.2
Sweden, 2004	0.2
Cyprus, 2006	0.1
Southeast Europe	
Bulgaria, 2001	0.5
Albania*, 2006	0.5
FYR of Macedonia, 2005	0.5
Croatia, 2006	0.4
Bosnia Herzegovina, 2005	0.3
Romania, 2004	0.2
Turkey, 2003	0.05
East Europe	
Russian Federation*, 2006	1.6
Ukraine, 2006	0.9
Belarus*, 2006	0.5
Moldova, Rep., 2002	0.3

AMERICA	
Central America	
Panama**	0.2
Honduras*, 2005	0.2
El Salvador*, 2005	0.1
Costa Rica*	0.1
Guatemala, 2005	0.04
North America	
USA, (15-64) [b],2000	0.6
Canada, (15-64) [*],2005	0.3
Mexico, 2002	0.1
South America	
Brazil, (12-65), 2005	0.5
Guyana*, 2002	0.3
Argentina*, 2005	0.2
Chile, 2004	0.2
Uruguay*, 2003	0.2
Peru*, (12-64), 2005	0.2
Venezuela*, 2003	0.1
Ecuador*, 2005	0.1
Colombia*, 2004	0.1
Suriname*, 2002	0.08
Bolivia*, 2004	0.07
The Caribbean	
Bahamas*, 2003	0.2
Dominican Rep.*, 2001	0.1
Barbados*, 2006	0.1
Jamaica*, 2001	0.1
Trinidad & Tobago*, 2002	0.09
Turks & Caicos Isl.*, 2002	0.07
Antigua Barbuda, 2000	0.05
OCEANIA	
Australia (15-64)[b], 2007	0.5
New Zealand, (15-64) [b] ,2006	0.4
AFRICA	
Eastern Africa	
Mauritius, 2003	2.0
Kenya, 2004	0.3
Somalia, 2004	0.2
Rwanda, 2004	0.1
Ethiopia**	0.05
Uganda, 2004	0.05
Tanzania, United Rep., 1998	0.02
North Africa	
Egypt, 2006	0.7
Algeria*, 2004	0.1
Libyan Arab Jamahiriya*, 2004	0.1
Tunisia*, 2006	0.09
Morocco, 2004	0.02

OPIATES
Annual prevalence of abuse as percentage of the population aged 15-64 (unless otherwise indicated)

Southern Africa	
South Africa*, 2005	0.4
Zambia*, 2003	0.4
Dem.Republic of Congo, 2004	0.2
Swaziland, 2004	0.2
Zimbabwe, 2004	0.04
Namibia, 2000	0.03
West and Central Africa	
Nigeria*, (10+), 1999	0.6
Angola*, 2001	0.3
Chad, 1995	0.2
Cape Verde*, 2004	0.2
Liberia*, 2004	0.2
Sierra Leone, 1997	0.2
Niger, 2004	0.2
Ghana, 2004	0.1
Congo Rep., 2004	0.1
Central African Republic, 2004	0.1
Senegal**	0.03
Cote d'Ivoire, 1997	0.01
ASIA	
Central Asia and Transcaucasia	
Kazakhstan, 2006	1.0
Kyrgyzstan, 2006	0.8
Uzbekistan, 2006	0.8
Georgia*, 2006	0.6
Tajikistan, 2006	0.5
Armenia, 2005	0.3
Turkmenistan**, 1998	0.3
Azerbaijan*, 2006	0.3
East and South-East Asia	
Macao SAR, China, 2003	1.1
Lao People's Dem. Rep., 2007	0.5
Myanmar, 2007	0.4
Viet Nam, 2005	0.3
China, 2005	0.3
Malaysia, 2005	0.2
Taiwan province, China, (12-64), 2005	0.2
Hong Kong SAR, China, 2006	0.2
Indonesia, 2005	0.2
Thailand, 2006	0.1
Japan[a], (15+), 2003	0.06
Philippines, 2005	0.05
Cambodia, 2004	0.03
Brunei Darussalam, 1998	0.01
Singapore[c], 2006	0.005
Middle East and South-West Asia	
Iran, Islamic Republic, 1999	2.8
Afghanistan*, 2005	1.4
Pakistan, 2006	0.7
Israel, (18-40), 2005	0.5
Bahrain, 1998	0.3
Jordan*, 2001	0.2
Kuwait*, 2004	0.2
Lebanon, 2003	0.2
Oman, 1999	0.09
Yemen**, 1999	0.09
Saudi Arabia*, 2006	0.06
South Asia	
India, 2001	0.4
Bangladesh*, 2003/4	0.4
Nepal, 2006	0.3
Maldives**, 2001	0.2
Sri Lanka, 2006	0.1

* UNODC estimates based on local studies, special population group studies, and /or law enforcement agency assessments.
** Tentative estimates.
a Lifetime prevalance
b Age adjusted to 15-64 year olds
c Drug registry

Sources: Annual Reports Questionnaires, Government Reports, US Department of State, European Monitoring Center for Drugs and Drug Addiction (EMCDDA), Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP).

3.5.1.2 Cocaine

COCAINE
Annual prevalence of abuse as percentage of the population aged 15-64 (unless otherwise indicated)

AMERICA	
North America	
USA, (15-64) [b], 2006	3.0
Canada, (15-64), 2004	2.3
Mexico*, 2006	0.8
South America	
Argentina, (12-65), 2006	2.6
Peru, (12-64), 2005	2.2
Bolivia, (12-50)[d], 2005	1.9
Chile, (12-64), 2006	1.5
Uruquay, (12-65), 2006	1.4
Ecuador*, 2005	1.2
Venezuela*, 2001	1.1
Colombia, (18-65), 2003	0.8
Brazil, (12-65), 2005	0.7
Suriname*, 2002	0.5
Paraguay, 2004	0.3
Central America	
Panama, (12-65), 2003	1.2
Nicaragua*, 2003	1.0
Honduras, (12-35), 2005	0.9
Belize*, 2002	0.7
El Salvador, (12-65), 2005	0.4
Costa Rica, 2001	0.4
Guatemala, 2005	0.2
The Caribbean	
Aruba*, 1997	1.3
Jamaica*, 2006	1.1
St. Lucia*, 2002	1.0
Dominican Rep., (12-70), 2000	0.9
Grenada*, 2003	0.9
Haiti*, 2006	0.9
Bahamas*, 2001	0.8
St.Vincent Grenadines*, 2002	0.7
Turks and Caicos*, 2002	0.7
Cayman Is.*, 2000	0.6
Barbados, 2007	0.4
Antigua Barbuda, 2000	0.1
EUROPE	
West and Central Europe	
Spain, 2005	3.0
England & Wales, (16-59), 2006/07	2.6
Italy, 2005	2.1
Northern Ireland, 2006	1.9
Ireland, 2006	1.7
Scotland, (16-59), 2004	1.5
Iceland*, 2003	1.1
Switzerland*, 2003	1.1
Denmark, (16-64), 2005	1.0
Austria, 2004	0.9
Belgium, 2004	0.9
Luxembourg*, 2003	0.9
Liechtenstein*, 2005	0.8
Norway, 2004	0.8
Germany, (18-64), 2007	0.7
Cyprus, (15-65), 2006	0.6
Estonia, 2003	0.6
France, 2005	0.6
Netherlands, 2005	0.6
Finland, 2006	0.5
Slovakia, 2004	0.5
Greenland*, 2003	0.4
Hungary, (18-54), 2003	0.4
Lithuania, 2004	0.3
Malta, (18-65), 2001	0.3
Portugal, 2001	0.3
Slovenia*, 2003	0.3
Czech Rep., 2004	0.2
Poland, (16-64), 2006	0.2
Sweden*, 2003	0.2
Latvia, 2003	0.2
Greece, 2004	0.1
Southeast Europe	
Bulgaria, (18-60), 2005	0.3
Croatia*, 2003	0.2
Romania, 2004	0.1
FYR of Macedonia, 2007	0.08
Albania*, 2004	0.07
Turkey*, 2003	0.04
East Europe	
Ukraine*, 2003	0.07
Belarus*, 2003	0.02
Russian Fed.*, 2005	0.02
OCEANIA	
Australia (15-64)[b], 2007	2.0
New Zealand, (15-64) [b], 2006	0.8
AFRICA	
East Africa	
Kenya**	0.1
Southern Africa	
South Africa*, 2005	0.8
Zambia**, 2000	0.2
Namibia, 1998	0.2
Angola, 1999	0.1
Zimbabwe, 2000	0.1
North Africa	
Morocco, 2004	0.05
Egypt, 2006	0.02
West and Central Africa	
Ghana, 1998	1.1
Nigeria, 1999	0.5
Cape Verde*, 2004	0.2
Sao Tome Principe,1997	0.02
Sierra Leone, 1996	0.02
Chad, 1995	0.01
ASIA	
East and South-East Asia	
Taiwan Prov. of China, 2005	0.10
Indonesia, 2005	0.03
Japan*, 2005	0.03
Philippines, 2005	0.03
Thailand, 2006	0.03
Hong Kong SAR China, (11+), 2003	0.002
Singapore, 2006	0.0002
Near and Middle East / South-West Asia/C.Asia and Transcaucasia	
Israel, (18-40), 2005	0.6
Armenia, 2005	0.1
Lebanon*, 2001	0.1
Jordan**	0.05
Kuwait*, 2005	0.04
Syrian Arab Rep.**, 2005	0.001

* UNODC estimates based on local studies, special population group studies, and /or law enforcement agency assessments.
** Tentative estimates; a Lifetime prevalance; b Age adjusted to 15-64 year olds; c Drug registry; d 1.9% cocaine paste; 1.6% cocaine HCL (Bolivia)

Sources: Annual Reports Questionnaires, Government Reports, US Department of State, European Monitoring Center for Drugs and Drug Addiction (EMCDDA), Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP).

3.5.1.3 Cannabis

CANNABIS
Annual prevalence of abuse as percentage of the population aged 15-64 (unless otherwise indicated)

EUROPE	
Western and Central Europe	
Italy, 2005	11.2
Spain, 2005	11.2
Switzerland*, 2003	9.6
Czech Rep., (18-64), 2004	9.3
France, 2005	8.6
Liechtenstein*, 2005	8.6
England and Wales, (16-59), 2006/07	8.2
Greenland*, 2003	7.6
Luxembourg, 2003	7.6
Austria, 2004	7.5
Northern Ireland, 2006	7.2
Ireland, 2006	6.3
Scotland, (16-59), 2004	6.3
Slovenia*, 2003	6.2
Netherlands, 2005	5.4
Denmark, (16-64), 2005	5.2
Belgium, (15-65), 2004	5.0
Germany, (18-64), 2007	4.7
Estonia, 2003	4.6
Iceland, (16-75), 2003	4.6
Norway, 2004	4.6
Slovakia, (18-64), 2004	4.1
Hungary, (18-54), 2003	3.9
Latvia, (15-68), 2003	3.8
Finland, 2006	3.6
Portugal, 2001	3.3
Sweden, 2006	3.1
Poland, 2006	2.7
Lithuania, 2004	2.2
Cyprus, (15-65), 2006	2.1
Greece, 2004	1.7
Malta, (18-65), 2001	0.8
Southeast Europe	
Croatia*, 2003	4.0
Bosnia & Herzegovina*, 2005	3.0
Turkey*, 2003	1.9
Albania, 2004	1.8
Bulgaria, (18-60), 2005	1.5
Romania, 2004	0.9
East Europe	
Russian Federation*, 2003	3.9
Ukraine*, 2003	3.6
Belarus, (18-60), 2005	1.5

AMERICA	
Central America	
Belize*, 2003	6.7
Guatemala*, (12-65), 2005	4.8
Panama*, 2003	4.0
El Salvador*, (12-45), 2005	2.7
Nicaragua*, 2002	2.2
Honduras*, 2004	1.5
Costa Rica, (12-70), 2000/1	1.3
North America	
Canada, (15-64), 2004	17.0
USA, (15-64)[b], 2006	12.2
Mexico*, 2006	3.1
South America	
Chile, (12-64), 2006	7.0
Argentina, (12-65), 2006	6.9
Uruguay, (12-65), 2006	5.2
Peru, (12-64), 2005	3.3
Venezuela*, 2002	3.3
Bolivia, 2005	3.2
Brazil, (12-65), 2005	2.6
Guyana*, 2002	2.6
Ecuador*, 2005	2.1
Suriname*, 2002	2.0
Colombia, (18-65), 2003	1.9
Paraguay*, (12-65), 2005	1.6
The Caribbean	
Jamaica* (12-55), 2001	10.70
St. Lucia*, 2006	9.00
Barbados, 2007	8.30
Grenada*, 2003	6.70
Haiti, 2005	6.20
St. Vincent & the Grenadines*,2002	6.20
Turks & Caicos Is.*, 2002	5.40
Bahamas*, 2003	4.70
Trinidad & Tobago*,2002	3.70
Dominican Rep., 2000	1.90
OCEANIA	
Papua New Guinea, 1995	29.5
Micronesia Fed.State, 1995	29.1
New Zealand, (15-64)[b], 2006	13.3
Australia (15-64)[b], 2007	11.4
New Caledonia**	1.9
Fiji, 1996	0.2
Vanuatu, 1997	0.1

[b/] Original data adjusted to age group 15-64

CANNABIS
Annual prevalence of abuse as percentage of the population aged 15-64 (unless otherwise indicated)

AFRICA	
East Africa	
Madagascar*, 2004	9.1
Kenya*, 1994	4.0
Mauritius, 2004	3.9
Comoros*, 2002	2.9
Ethiopia*, 1999	2.6
Somalia, 2002	2.5
Uganda**	1.4
Tanzania, United Rep.**, 1999	0.2
North Africa	
Egypt, 2006	9.6
Morocco, 2004	4.2
Algeria*, 2005	3.3
Libyan Arab Jamahiriya,[c] 1998	0.05
Southern Africa	
Zambia*, 2003	17.7
South Africa*, 2005	8.9
Zimbabwe, 2000	6.9
Namibia, 2000	3.9
Angola, 1999	2.1
West and Central Africa	
Ghana, 1998	21.5
Sierra Leone, 1996	16.1
Nigeria, 2000	13.8
Cape verde*, 2004	8.1
Mali*, 1995	7.8
Burkina Faso*, 2006	2.9
Senegal, 1999	2.8
Togo*, 2006	2.7
Chad, 1995	0.9
ASIA	
Central Asia and Transcaucasia	
Kyrgyzstan*, 2001	6.4
Kazakhstan*, 2000	4.2
Uzbekistan*, 2003	4.2
Armenia*, 2003	3.5
Azerbaijan*, 2004	3.5
Tajikistan*, 1998	3.4
East and South-East Asia	
Philippines*, 2004	4.2
Cambodia*, 2003	3.5
Malaysia*, 2003	1.6
Myanmar*, 2005	0.9
Thailand, (12-65), 2006	0.9
Indonesia, 2005	0.7
Lao People's Dem. Rep.*, 2002	0.7
Macao SAR, China*, 2003	0.7
Taiwan province, China**	0.5
Viet Nam*, 2002	0.3
Japan, 2002	0.1
Brunei Darussalam, 1996	0.02
Hong Kong SAR,[c] China, 2005	0.02
Singapore,[c] 2006	0.005
Republic of Korea,[c] 2004	0.002
Near and Middle East / South-West Asia	
Israel, (18-40), 2005	8.5
Lebanon, 2001	6.4
United Arab Emirates*, 2006	5.4
Iran, Islamic Republic, 1999	4.2
Pakistan*, 2000	3.9
Afghanistan, 2005	3.6
Kuwait*, 2005	3.1
Jordan*, 2001	2.1
Syrian Arab Rep.*, 2002	2.0
Bahrain**	0.4
Saudi Arabia**, 2006	0.3
Oman, 1999	0.1
Qatar, 1996	0.1
South Asia	
Bangladesh, 1997	3.3
India, 2000	3.2
Nepal*, 1998	3.2
Maldives*, 2007	2.0
Sri Lanka, 2000	1.5

* UNODC estimates based on local studies, special population group studies, and/or law enforcement agency assessments.
** Tentative estimates.
a Lifetime prevalance
b Age adjusted to 15-64 year olds
c Drug registry

Sources: Annual Reports Questionnaires, Government Reports, US Department of State, European Monitoring Center for Drugs and Drug Addiction (EMCDDA), Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP).

3.5.1.4 Amphetamine-type stimulants (excluding ecstasy)

AMPHETAMINES
Annual prevalence of abuse as percentage of the population aged 15-64 (unless otherwise indicated)

EUROPE	
West and Central Europe	
England & Wales, (16-59), 2005/6	1.3
Estonia, 2003	1.3
Latvia, 2003	1.1
Norway, 2004	1.1
Northern Ireland, (16-59), 2006	1.0
Scotland, (16-59), 2004	1.0
Spain, 2005	1.0
Iceland*, 2003	0.9
Austria, 2004	0.8
Hungary, 2003	0.8
Switzerland*, 2003	0.8
Czech Rep., (18-64), 2004	0.7
Denmark, 2005	0.7
Poland, 2006	0.7
Finland, 2006	0.6
Belgium*, 2005	0.6
Germany, (18-64), 2007	0.5
Cyprus, 2006	0.4
Ireland, 2006	0.4
Italy, 2005	0.4
Luxembourg, 1999	0.4
Lithuania, 2004	0.3
Netherlands, 2005	0.3
France, 2005	0.2
Greece, 2004	0.2
Liechtenstein*, 2005	0.2
Slovakia, 2004	0.2
Slovenia*, 1999	0.2
Sweden, 2000	0.2
Portugal, 2001	0.1
Malta, (18-65), 2001	0.03
Southeast Europe	
Croatia*, 2003	0.5
Bulgaria, (18-60), 2005	0.4
Turkey*, 2003	0.2
Romania*, 2004	0.1
Albania, 2004	0.02
East Europe	
Belarus*, 2006	0.35
Moldova, Rep., 1998	0.2
Russian Federation*, 2003	0.2
Ukraine*, 2003	0.2

AMERICA	
Central America	
El Salvador, (12-65), 2005	3.0
Costa Rica, 2000	1.0
Guatemala*, 2005	0.9
Honduras*, 2005	0.8
Nicaragua*, 2003	0.8
Panama*, 2003	0.6
North America	
USA, (15-64) [b], 2006	1.6
Canada, (15-64), 2004	1.0
Mexico*, 2006	0.4
South America	
Brazil, (12-65), 2005	0.7
Suriname*, 2002	0.6
Venezuela*, 2002	0.6
Argentina*, 2005	0.6
Colombia*, 2005	0.5
Paraguay*, 2005	0.5
Chile, (12-64), 2006	0.4
Bolivia*, 2004	0.3
Ecuador*, 2005	0.2
Peru*, 2005	0.1
Uruguay, (12-65), 2006	0.3
Caribbean	
Dominican Republic*, 2003	1.1
Trinidad & Tobago*, 2002	0.8
Grenada, 2005	0.7
Bahamas*, 2003	0.3
Turks & Caicos Islands*, 2003	0.3
Barbados, 2007	0.2
OCEANIA	
Australia (15-64)[b], 2007	2.9
New Zealand, (15-64) [b], 2006	2.3

AMPHETAMINES
Annual prevalence of abuse as percentage of the population aged 15-64 (unless otherwise indicated)

AFRICA	
East Africa	
Kenya**	0.6
Ethiopia**	0.3
North Africa	
Egypt, 2006	0.52
Morocco, 2004/5	0.02
West & Central Africa	
Nigeria, 1999	1.1
Ghana**	1.0
Cameroon**	0.9
Chad, 1996	0.01
Southern Africa	
South Africa*, 2005	0.5
Namibia, 2000	0.1
Zambia*, 2003	0.1
Zimbabwe, 2000	0.1
ASIA	
Central Asia and Transcaucasia	
Armenia, 2005	0.04
Uzbekistan, 1997	0.01
East, South & South-East Asia	
Philippines*, 2004	6.0
Thailand, 2006	0.8
Lao PDR*, 2004	0.7
Cambodia*, 2004	0.6
Taiwan Prov. of China, 2005	0.6
Malaysia*, 2005	0.6
Indonesia, 2005	0.3
Japan,[a] 2005	0.3
Brunei Darussalam*, 2006	0.3
Myanmar*, 2005	0.2
Viet Nam*, 2003	0.2
Hong Kong SAR, China*, 2006	0.2
Republic of Korea, 2004	0.1
India, 2001	0.02
Singapore,[c] 2006	0.005
Macao SAR,[c] China, 2001	0.002
Near and Middle East / South-West Asia	
Israel, (18-40), 2005	0.4
Jordan, 2001	0.4
Lebanon*, 2001	0.4
Saudi Arabia*, 2006	0.4
Kuwait*, 2005	0.3
Oman, 1998	0.1

* UNODC estimates based on local studies, special population group studies, and /or law enforcement agency assessments.
** Tentative estimates.
a Lifetime prevalance
b Age adjusted to 15-64 year olds
c Drug registry

Sources: Annual Reports Questionnaires, Government Reports, US Department of State, European Monitoring Center for Drugs and Drug Addiction (EMCDDA), Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP).

3.5.1.5 Ecstasy

ECSTASY
Annual prevalence of abuse as percentage of the population aged 15-64 (unless otherwise indicated)

EUROPE	
West and Central Europe	
Czech Rep., (18-64), 2004	3.5
England & Wales, (16-59), 2006/07	1.8
Northern Ireland, 2006/07	1.8
Estonia, (15-65), 2004	1.7
Hungary, (18-54), 2003	1.4
Ireland, 2006/07	1.2
Netherlands, 2005	1.2
Scotland, (16-59), 2004	1.2
Slovakia, 2004	1.2
Spain, 2005	1.2
Belgium*, 2003	1.1
Cyprus, 2006	1.0
Austria, 2004	0.9
Slovenia*, 2003	0.9
Latvia, 2003	0.8
Switzerland*, 2003	0.8
Iceland*, (15-65), 2003	0.6
Finland, 2004	0.5
France, 2005	0.5
Liechtenstein*, 2005	0.5
Luxembourg*, (15-65), 1998	0.5
Norway, 2004	0.5
Germany, (18-64), 2007	0.4
Italy, 2005	0.4
Lithuania, 2004	0.4
Portugal, 2001	0.4
Sweden*, 2003	0.4
Denmark, 2005	0.3
Poland, 2006	0.3
Greece, 2004	0.2
Malta, (18-65), 2001	0.2
Southeast Europe	
Bulgaria, (18-60), 2005	0.5
Croatia*, (15-65), 2003	0.3
Turkey*, 2003	0.3
FYR of Macedonia*, 1999	0.1
Romania*, 2004	0.1
Albania, 2004	0.04
East Europe	
Ukraine*, 2003	0.1
Russian Federation*, 2005	0.05
AMERICA	
Central America	
Panama*, 2003	0.4
Belize*, 2003	0.2
El Salvador*, 2003	0.1
Nicaragua*, 2003	0.1
Guatemala*, 2005	0.1
Honduras*, 2005	0.1
North America	
Canada, (15-64), 2004	1.3
USA, (15-64) [b], 2006	1.0
Mexico, 2002	0.01
South America	
Peru, (12-64) [d] , 2005	0.9
Argentina, (12-65), 2006	0.5
Uruguay*, 2006	0.2
Brazil*, 2005	0.2
Colombia*, 2005	0.2
Ecuador*, 2005	0.2
Venezuela*, 2001	0.2
Bolivia, 2005	0.1
Chile, (12-64), 2006	0.1
Guyana*, 2002	0.1
Paraguay*, 2005	0.1
Suriname*, 2002	0.1
The Caribbean	
Turks & Caicos Is.*, 2003	0.7
Barbados, 2007	0.5
Dominican Rep.*, 2000	0.2
Bahamas*, 2003	0.1
Trinidad & Tobago, 2005	0.1
AFRICA	
West and Central Africa	
Cape Verde*, 2004	0.06
Southern Africa	
South Africa*, 2004	0.4
Zambia*, 2003	0.3
Namibia, 2000	0.1
Zimbabwe*, 2003	0.1
Morocco, 2003	0.02
Ghana, 1995	0.01
ASIA	
East and South-East Asia/South Asia/Transcaucasia	
Taiwan Prov. of China, 2005	0.5
Malaysia*, 2003	0.4
Indonesia, 2005	0.3
Macao SAR, China*, 2002	0.3
Rep. of Korea, 2004	0.3
Philippines, 2004	0.2
Viet Nam*, 2003	0.2
Armenia, 2005	0.1
Cambodia*, 2003	0.1
Japan[a], 2003	0.1
Thailand, 2001	0.1
Hong Kong SAR, China, 2005	0.03
India*, 2004	0.01
Singapore,[c] 2006	0.003
Near and Middle East / South-West Asia	
Israel, (18-40), 2005	0.7
Lebanon*, 2001	0.5
OCEANIA	
Australia (15-64)[b], 2007	4.4
New Zealand, (15-64) [b], 2006	2.6

* UNODC estimates based on local studies, special population group studies, and /or law enforcement agency assessments.
** Tentative estimates; a Lifetime prevalance; b Age adjusted to 15-64 year olds; c Drug registry; d In urban areas

Sources: Annual Reports Questionnaires, Government Reports, US Department of State, European Monitoring Center for Drugs and Drug Addiction (EMCDDA), Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC Global Assessment Programme on Drug Abuse (GAP).

3.5.2 Treatment demand (primary drugs of abuse)

3.5.2.1 Primary drugs of abuse among persons treated for drug problems in Africa

Country*	Source	Year	Distribution of main drugs in percentages								
			Cannabis	Opiates	Cocaine	Amphetamine - type Stimulants	Methaqualone	Depressants	Inhalants	Khat	People treated**
Algeria	ARQ	1999/2006***	81.3 %	6.6 %	0.2 %	-	-	-	2.1 %	-	1,436
Botswana	SENDU/ ARQ	2003/2006**	100.0 %								311
Burkina Faso	ARQ	2006	60.0 %	4.0 %	2.7 %	28.0 %	-	-	5.3 %	-	75
Cameroon [(a)]	RAS	1995	48.5 %	12.1 %	13.6 %	-	-	-	36.4 %	-	
Cape Verde	ARQ	2006									57
Central Africa Republic	ARQ	2006	100.0 %								58
Chad	ARQ	1996	50.6 %	-	0.2 %	18.8 %	-	-	6.3 %	-	16
Congo	ARQ	1995	100.0 %								41
Cote d'Ivoire	ARQ	1998	91.0 %	4.1 %	3.0 %	-	-	-	-	-	
Egypt	UNODC FO	1999	22.1 %	45.1 %	0.4 %	-	-	-	-	-	
Eritrea	ARQ	2006	38.5 %	11.5 %	7.7 %	-	-	-	42.3 %		26
Ethiopia	ARQ	2006	18.8 %	18.8 %		-	-	-	-	62.5 %	64
Ghana	GAP	2005	84.5 %	0.4 %	1.0 %	-	-	-	-	-	1,531
Kenya [(b)]	Univ.	2005	36.3 %	37.8 %	9.7 %	0.5 %	-	0.5 %	1.2 %	11.4 %	402
Lesotho	SENDU	2004	100.0 %								54
Madagascar	ARQ	2005	100.0 %								342
Malawi	SENDU	2004	100.0 %								796
Mauritius	ARQ	2003/2006***	22.3 %	58.3 %		-	-	-	0.5 %	-	7,500
Mozambique	SENDU	2004	33.3 %	54.7 %	11.4 %	-	-	-	-	-	150
Namibia	ARQ	2005/2006***	2.4 %	2.4 %	24.4 %	9.8 %	61.0 %	-	-	-	238
Niger	ARQ	2006	69.2 %	-		30.8 %	-	-	-	-	168
Nigeria	Govt.	2004	89.7 %	1.2 %	0.7 %	2.0 %	-	3.9 %	3.7 %	-	925
Sao Tome & Principe	ARQ	1997	22.2 %	5.5 %	72.2 %	-	-	-	-	-	
Senegal	GAP	2005	78.0 %	1.0 %	2.0 %	1.0 %	-	-	11.0 %	-	202
Seychelles	ARQ	2005	55.4 %	43.1 %		1.5 %	-	-	-	-	65
Sierra Leone	ARQ	1997	96.8 %	-	0.6 %	-	-	-	-	-	2,067
South Africa	ARQ	2006	32.7 %	17.5 %	17.5 %	26.9 %	5.3 %	-	-	-	16,300
Swaziland	SENDU	2004	92.2 %	0.9 %	0.9 %	-	4.7 %	0.9 %	-	-	128
Tanzania	SENDU	2004	62.7 %	32.7 %		-	-	-	-	-	340
Togo	ARQ	2002	56.2 %	4.3 %	4.9 %	-	-	-	34.6 %	-	162
Tunisia	ARQ	2006									500
Zambia	ARQ	2005									233
Total											34,187
Average			**63.6 %**	**15.7 %**	**9.6 %**	**5.2 %**	**3.1 %**	**0.2 %**	**6.2 %**	**3.4 %**	

* Note that treatment definitions differ from country to country

** Excluding alcohol.

*** The second year specified is for the number of people treated (last column).

[(a)] Proxy: drugs locally consumed, based on key informants from social services (health affairs), from traditional healers, and repression.

[(b)] Proxy: cohort of abusers identified from rehabilitation centres, treatment centres, hospitals, streets, and drug dens within 5 urban areas.

Sources: UNODC, Annual Reports Questionnaires (ARQ) and Field Office (FO) data,
Southern African Development Community Epidemiology Network on Drug Use (SENDU), International Psychology Reporter, UNODC Global Assessment Programme on Drug Abuse (GAP)

3.5.2.2 Primary drugs of abuse among persons treated for drug problems in America

			Distribution of main drug in percentages										
					Cocaine Group				ATS Group				
Country*	Source	Year	Cannabis	Opiates	Sum of all Cocaine	Cocaine	Basuco	Crack	Amphetamines	Ecstasy	Inhalants	Tranquilizers	People Treated
Argentina	ARQ	2006/2005***	46.3%	0.8%	45.0%	45.0%	*7.3%*	*0.2%*	0.2%	0.2%	*15.3%*	7.6%	144,120
Bahamas	ARQ	2003	46.4%		36.7%	36.7%							536
Barbados	SIDUC/ARQ	1998/2003/04	27.8%		72.3%	5.6%		66.7%					318
Bolivia	SIDUC/ARQ	1998/2003***	14.7%		54.9%	23.1%	31.8%		1.4%		23.5%		5,491
Brazil	ARQ	2005											850,000
Canada	CCENDU	2001	24.7%	8.1%	25.6%	25.6%			0.4%			21.2%	25,908
Chile	ARQ	2006											7,367
Colombia	SIDUC	1998	13.4%		56.3%	28.1%	28.2%		3.6%		4.8%		n.a.
Costa Rica	ARQ	2002/04***	30.1%		54.3%	23.8%		30.5%					13,000
Dominican Republic	ARQ	2001/2006***	20.0%	3.6%	76.4%	76.4%							7,590
Ecuador	ARQ	2005	55.9%	1.9%	33.5%	33.5%		*2.9%*	8.0%	0.6%	*5.8%*		2,705
El Salvador	ARQ/Govt.	2004/2006***	13.8%		63.8%	17.2%		46.6%					8,074
Grenada	ARQ	2004	60.0%		40.0%	40.0%							250
Guatemala	ARQ	2003	25.0%		75.0%	75.0%							2,000
Haiti	ARQ	2002	35.4%	2.1%	37.5%	37.5%						6.3%	51
Honduras	SIDUC/ARQ	1998/2006***	34.4%		9.0%	3.1%		5.9%			9.0%		7,500
Jamaica	ARQ	2006	43.5%		56.1%	56.1%			0.1%				310
Mexico	Govt	2006	31.3%	2.4%	30.2%	30.2%			9.9%	1.7%	15.4%	9.1%	9,346
Nicaragua	SIDUC	1998	7.3%		77.3%	14.5%		62.8%			12.7%		n.a.
Panama	SIDUC/ARQ	1998/2001***	5.1%		49.4%	48.9%	0.5%				0.5%		5,838
Peru	ARQ	2005/2006***	31.1%	0.3%	67.0%	67.0%			0.3%			1.4%	5,612
Saint Lucia	ARQ	2005	17.5%		82.5%	82.5%							40
St.Vincent & Grenadines	ARQ	2004	75.3%		24.7%	24.7%							73
Trinidad & Tobago	ARQ	2006	48.8%		51.1%	51.1%							1,194
Uruguay	SIDUC/ ARQ	1998/2006***	12.2%		46.4%	46.4%			0.6%		9.2%		9,000
USA	SAMSHA	2006	50.0%	19.0%	37.8%	37.8%			21.8%		10.3%	15.7%	2,457,000
Venezuela	ARQ	2006	13.1%	6.8%	79.3%	20.7%	4.5%	54.1%	0.6%	0.2%			6,523
Total													**3,569,846**
Total North America			35.3%	9.8%	31.2%				10.7%	1.7%	12.9%	15.3%	2,492,254
Total South America			30.8%	2.6%	54.0%				1.8%	0.3%	10.1%	5.1%	1,077,592
Unweighted average			**31.3%**	**1.7%**	**47.5%**				**4.3%**	**0.7%**	**10.7%**	**10.2%**	

Note: These drugs represent the most common drugs of impact across countries, therefore the percentages may not add up to 100% for all countries.

* Please note that treatment definitions differ from country to country

** Excluding alcohol;

*** The second year specified is for the number of people treated (last column).

n.a. not available

Sources: UNODC Annual Reports Questionnaires data (ARQ); SIDUC, Treatment Centres Data 1998, Drug of impact; SIDUC 1997 Report; Substance Abuse and Mental Health Services Administration (SAMHSA), Treatment episode dataset TEDS, USA.

Canadian Community Epidemiology Network on Drug Use (CCENDU), Morbidity Statistics 2000/2001 (separations related to illicit drug use)

3.5.2.3 Primary drugs of abuse among persons treated for drug problems in Asia

			Distribution of main drug in percentages							
						Amphetamine-type stimulants				
Country*	Source	Year	Cannabis	Opiates	Cocaine	Amphetamines	Ecstasy	Inhalants	Sedatives	People treated**
Afghanistan	ARQ	2005								2,049
Armenia	ARQ	2006	-	98.5%	1.5%	-	-	-	-	105
Azerbaijan	ARQ / UNODC est.	2003	20.0%	75.0%	-	-	-	5.0%	-	n.a.
Bahrain	ARQ	1998		100.0%						1,488
Bangladesh	ARQ	2006	9.0%	91.0%	-	-	-	-	-	909
Brunei Darussalam	UNODC DAINAP	2006	1.8%	-	-	98.2%	-	-	-	57
China	UNODC FO (DAINAP)/ARQ	2004	-	90.0%	-	0.6%	6.2%	-	3.3%	105,151
Hong Kong, SAR of China	Govt/ARQ	2004/2006***	4.2%	72.5%	-	3.9%	-	-	-	9,695
India	ARQ	2004/2005	15.5%	61.3%	1.5%	0.2%		0.9%	4.1%	81,802
Indonesia	ARQ	2006	0.7%	97.2%	-	1.8%	-	-	0.3%	3,777
Iran	Govt.	2001	2.5%	91.6%	-	-	-	-	-	33,990
Israel	ARQ	2006								12,000
Japan	Govt	2004	19.0%	0.6%	0.1%	55.8%	0.2%	17.9%	4.9%	1,124
Jordan	ARQ	1999	-	21.4%	-	45.2%	-	6%	-	85
Kazakhstan	UNODC FO	2000/2004***	20.0%	74.6%	-	0.1%	-	-	-	47,903
Kuwait	ARQ	2005	56.0%	56.0%	3.6%	36.0%	-	2.0%	33.0%	908
Kyrgyzstan	ARQ	2005	33.0%	58.9%	-	-	-	3.9%	-	666
Lao PDR, Vientiane	UNODC FO (DAINAP)	2003/2004***	2.4%	5.0%	-	77.0%	-	-	-	1,072
Lebanon	ARQ / UNODC Est.	2004/2006***	32.0%	57.0%	4.0%	0.5%		-	6.0%	1,124
Macao, SAR of China	ARQ	2006	-	84.8%	-	-	2.6%	-	1.5%	358
Malaysia	ARQ/AMCEWG	2005/2006***	15.4%	68.3%	-	12.8%	1.2%	-	-	5,148
Maldives	ARQ	2003	13.0%	87.0%	-	-	-	-	-	126
Mongolia	ARQ	2001	28.6%	71.4%	-	-	-	-	-	7
Myanmar	ARQ	2004/2006***	1.9%	86.3%	-	11.8%	-	-	-	1,469
Nepal	AMCEWG/ARQ	1994/2006***	5.4%	87.2%	-	-	-	-	-	900
Oman	ARQ	2002		100.0%						7
Pakistan	ARQ	2004	37.0%	49.0%	-	-	-	-	-	4,000
Philippines	ARQ	2006	24.7%	0.3%	1.0%	61.5%	1.3%	10.6%	0.5%	4,703
Qatar	ARQ	1997/ 2006***	5.1%	25.4%	-	1.7%	-	10.2%	-	164
Republic of Korea	ARQ	2005	10.8%	8.1%	-	81.1%	-	-	-	148
Saudi Arabia	ARQ	2001	15.9%	15.1%	-	41.3%	-	27.8%	-	1,368
Singapore	UNODC DAINAP	2006	-	45.5%	-	9.0%	8.8%	-	-	433
Syria	ARQ	2006	0.2%	94.9%	0.9%	-	-	-	4.1%	674
Sri Lanka	ARQ	2005/2006***	-	90.8%	-	-	-	-	-	2,738
Taiwan, Province of Chin	NBCD Taiwan Health	2006	-	93.8%	-	29.0%	0.6%	0.7%	7.2%	12,232
Tajikistan	ARQ	2004/2005***	-	99.2%	-	-	-	-	-	680
Thailand	ARQ	2006	10.5%	6.0%	0.0%	76.0%	0.3%	5.7%	-	44,264
Turkmenistan	ARQ	2004								28,720
United Arab Emirates	ARQ	2006								22
Uzbekistan	ARQ	2004/2006***	16.8%	78.8%	-	-	-	0.9%	0.6%	6,517
Viet Nam	AMCEWG/DAINAP	2001/2006***	-	98.0%	-	2.0%	-	-	-	38,238
Total										**449,700**
Average (unweighted)			**11.5%**	**63.3%**	**0.4%**	**18.4%**	**0.6%**	**2.5%**	**1.9%**	

Note: This table does not include "other drugs", therefore the percentages will not add up to 100%.
* Please note that treatment definitions differ from country to country
** Excluding alcohol
*** The second year specified is for the number of people treated (last column).
Sources: UNODC, Annual Reports Questionnaire (ARQ) and Field Office (FO) data; Asian Multicity Epidemiology Work Group (AMCEWG); National Institute on Drug Abuse (USA), Community Epidemiology Work Group (CEWG); Govt. reports; Drug Abuse Information Network for Asia and the Pacific (DAINAP).

3.5.2.4 Primary drugs of abuse among persons treated for drug problems in Europe

Country*	Source	Year	Distribution of main drug in percentages								
						Amphetamine-type stimulants					
			Cannabis	Opiates	Cocaine	Amphetamines	Ecstasy	Hallucinogens	Hypnotics and Sedatives	Inhalants/ Solvents	People treated**
Albania	ARQ	2006	7.0%	93.0%							2,140
Andorra	ARQ	2006									434
Austria	EMCDDA	2005		100.0%							7,554
Belarus	UNODC	2004	10.7%	65.3%	0.03%	3.1%	1.6%	0.9%	2.8%	14.4%	5,175
Belgium	ARQ	2004	20.0%	44.2%	13.0%	11.8%	1.7%				3,662
Bulgaria	ARQ	2005	2.3 %	96.4%	0.3%	0.5%	0.1%		0.4 %	0.3 %	2,017
Croatia	ARQ	2006	14.7 %	76.8%	1.5%	2.9 %	2.4 %		1.7 %		7,427
Cyprus	ARQ	2006	25.4 %	56.3%	15.2 %	0.2 %	2.7 %	0.2 %	0.4 %		560
Czech Republic	ARQ	2005	14.6 %	24.3%	0.2%	57.4 %	0.3 %		1.1 %	2.2 %	8,534
Denmark	ARQ	2005	34.2%	49.1%	6.3%	7.1%	0.9%	0.1%	2.2 %		5,228
Estonia	EMCDDA	2005		82.0%		5.8%					1,339
Finland	EMCDDA	2005/2006***	20.4%	39.0%	0.1%	30.4%	0.4%	0.1%	8.5 %		2,935
France	ARQ	2004	26.9%	63.5%	5.3%	0.2%	0.9%		2.1 %		79,500
Germany	ARQ	2005	29.7%	38.2%	15.6%	8.6%	5.2%	2.7%			51,826
Greece	ARQ	2006	7.6%	87.7%	2.6%		0.1%		1.2 %		4,508
FYR of Macedonia	ARQ	2005	1.3%	98.7%							902
Hungary	ARQ	2006	37.7 %	15.0%	1.3%	4.9%	2.2 %		24.6 %		15,480
Iceland	ARQ/UNODC	2000/2004***	26.3 %	0.1%	7.1%	65.6 %	0.9 %				1,655
Ireland	ARQ	2005	21.6%	65.2%	9.8%	0.8%	2.6%				12,263
Italy	ARQ	2006	9.6%	72.3%	14.0%	0.2%	0.5%		0.6 %		171,353
Latvia	ARQ	2006	1.3 %	55.8%	0.2%	11.8 %				2.7 %	587
Liechtenstein	ARQ	2006	81.3 %		15.6%	3.1 %					32
Lithuania	ARQ	2005/2006****	0.5 %	80.3%	0.1%	2.5 %		0.2 %	1.5 %	3.1 %	3,213
Luxembourg	ARQ/EMCDDA	2003/2006***	*8.0%*	*76.0%*	*11.0%*						1,901
Malta	UNODC/EMCDDA	2003/2005***	7.4 %	83.5%	5.8%	3.0 %	0.7 %		0.2 %		2,121
Moldova	ARQ/UNODC	2004/2006****	51.8 %	39.1%		3.8 %					5,327
Netherlands	ARQ	2005	19.4%	45.0%	31.2%	3.5%	0.9%				29,908
Norway	Focal Point EMCDDA	2004	14.0 %	52.0%	1.0 %	15.0 %	0.1 %				3,003
Poland	ARQ/UNODC	2003/2005***	3.0 %	23.3%	0.9%	8.9 %		0.6 %	10.1 %	2.7 %	13,320
Portugal	ARQ/Focal Point EMCDDA	2004/2006***	5.0%	63.0%	25.0%				1.0 %		32,460
Romania	ARQ	2006	4.2 %	94.6%	0.2%	0.6 %	0.4 %				1,364
Russian Fed.	UNODC	2006/2004***	6.0 %	89.0%	*0.06%*	1.0 %					52,460
Slovakia	ARQ	2006	20.2 %	51.7%		27.1 %	1.0 %				1,927
Slovenia	UNODC/EMCDDA	2004/2005***	53.3 %	96.2%	24.1%	1.2 %	4.0 %			9.0 %	3,000
Spain	ARQ	2004	12.7%	42.3%	42.4%	0.7%	0.5%	0.1%	1.4 %		51,936
Sweden	ARQ	2005	20.4%	27.5%	2.9%	41.0%	0.3%		7.7 %		6,750
Switzerland	Govt.	2003/2004	14.2 %	43.9%	25.4%	0.5 %	0.8 %	0.3 %	3.0 %		20,316
Turkey	Govt.	2006	37.2 %	41.8%	3.8%		3.8 %		2.1 %	10.5 %	2,844
United Kingdom	ARQ	2006	12.6%	59.6%	9.3%	3.2%	0.8%		2.1 %		117,783
Total Europe											**734,744**
Total East Europe											127,056
Total West Europe											607,688
Average (unweighted) Europe			**19.0%**	**60.3%**	**9.1%**	**10.5%**	**1.4%**	**0.6%**	**3.7%**	**5.6%**	
Average (unweighted) East Europe			16.6%	66.1%	2.7%	9.4%	1.8%	0.6%	5.5%	5.6%	
Average (unweighted) West Europe			20.8%	55.4%	12.9%	11.5%	1.2%	0.6%	2.5%		

Note: In some countries people are being treated for more than one substance; sum of the percentages may thus exceed 100%.
* Please note that treatment definitions differ from country to country
** excluding alcohol
*** The second year specified is for the number of people treated (last column).
Sources: UNODC, Annual Reports Questionnaire (ARQ) data; European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), Statistical Bulletin

3.5.2.5 Primary drugs of abuse among persons treated for drug problems in Oceanea

			Distribution of main drugs in percentages							
						Amphetamine-type stimulants				
Country*	**Source**	**Year**	**Cannabis**	**Opiates**	**Cocaine**	**Amphetamines**	**Ecstasy**	**Hallucinogens**	**Sedatives**	**People treated****
Australia***	ARQ	2004/2005***	41.4%	34.3%	0.5%	19.7%	0.8%		3.4%	74,959
New Zealand	ARQ	2005/2006****	53.2%	30.8%	0.2%	15.0%		0.9%		19,334
Total										94,293
Average			**47.3%**	**32.6%**	**0.4%**	**17.4%**	**0.8%**		**3.4%**	

* Note that treatment definitions differ from country to country

** Excluding alcohol.

*** Data for Australia refer to closed drug related treatment episodes over the July 2004-June 2005 period.

**** The second year specified is for the number of people treated (last column).

Source: UNODC, Annual Reports Questionnaire (ARQ) data

4. METHODOLOGY

4.0 Methodology

Considerable efforts have been made over the last few years to improve the estimates presented in this report. Nonetheless, the data must still be interpreted with caution because of the clandestine nature of drug production, trafficking and abuse. Apart from the 'hidden' nature of the phenomenon being measured, the main problems with regard to data relate to the irregularity and incompleteness in reporting. This affects the quantity, quality and comparability of information received. First, the irregular intervals at which some Governments report may result in absence of data in some years but availability in others. The lack of regular data, for which UNODC tries to compensate by reference to other sources, can influence trend patterns. Secondly, submitted questionnaires are not always complete or sufficiently comprehensive. All figures should thus be seen as likely orders of magnitude of the drug problem, but not as precise results. It should be also noted that all figures provided, particularly those of more recent years, are subject to updating.

SOURCES OF INFORMATION

Under the International Drug Conventions, Member States are formally required to provide drug related information annually, as detailed by the Commission on Narcotic Drugs, to the 'Secretary General' of the United Nations (i.e. the Secretariat of UNODC). The Commission on Narcotic Drugs developed the Annual Reports Questionnaire (ARQ) to collect of these data.

The World Drug Report 2008 is based primarily on data obtained from the ARQs returned by Governments to UNODC over the June 2007 to May 2008 period. The data collected during this period normally refer to the drug situation in 2006. UNODC sent out the questionnaire to 194 countries. Some of them were forwarded on to autonomous territories, thus bringing the total to 205. UNODC received 109 replies to its questionnaire on Drug Abuse Demand (Part II) and 126 replies to its questionnaire on Illicit Supply of Drugs (Part III). The best coverage was from countries in Europe (87% of all countries in Europe returned Part II and 89% Part III of the ARQ), followed the Americas (39% of the countries filling in the Demand and 49% the Supply ARQ) and Asia (58% Demand, 71% Supply ARQ). In the case of Africa, 52% of countries replied to the Supply ARQ and 41% to the Demand ARQ. In the Oceania region, three countries including the two largest countries supplied information, equivalent to 21% of the countries in the region. Member states' responses to the ARQs are shown on the subsequent maps.

In general, the ability of Member States to provide information on illicit drug supply is significantly better than their ability to provide demand related information. The analysis of the 'Supply ARQs' revealed, that 83% of them were 'substantially' completed compared to just 55% of the 'Demand ARQs'. ARQs where key questions (see below) were more than 50% completed were classified as having been 'substantially filled in'; the rest were classified as having been only partially filled in.[a]

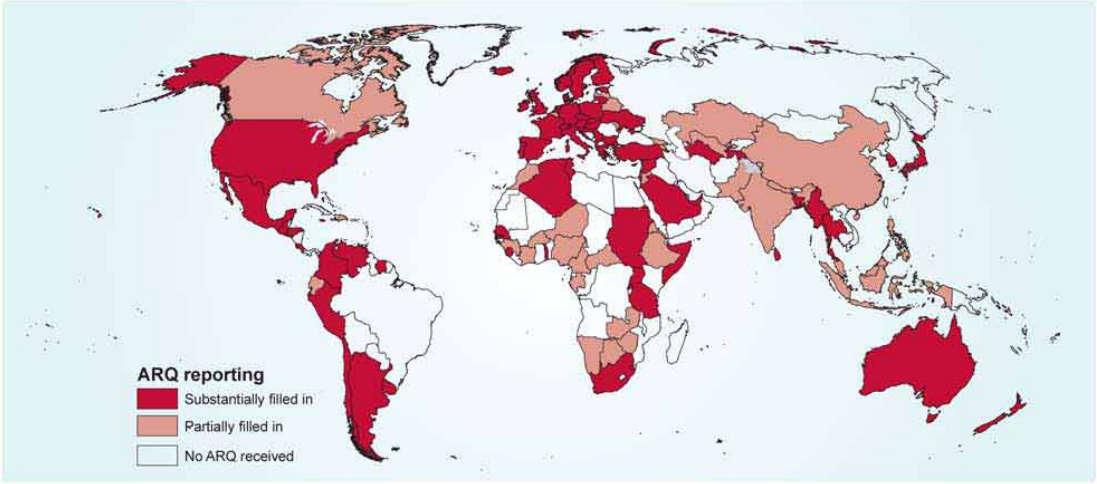
In order to identify the extent to which Member states provided information, a number of key questions in the ARQs were identified:

- For the 'Supply ARQs (Part III)', this included replies to the questions on 'seizures', i.e. on the quantities seized (replied by 98% of the countries returning the ARQ), the number of seizure cases (70%), 'trafficking' (origin of drugs and/or destination (84%)), 'drug prices' (90%), 'drug related arrests' and/or 'convictions' (91%). The overall analysis of these data revealed – as mentioned before - that 'Supply ARQs' were 86% completed.
- For the Demand ARQs (Part II), the key questions used for the analysis referred to 'trends in drug abuse' and 'ranking of drugs in terms of their prevalence among the general population' (replied by 90% of the Member States); 'prevalence estimates' (general population (50%), students (56%); and 'treatment' (73%). The overall response rate of completion based on these questions was 67% for the countries which returned a 'Demand ARQ' to UNODC.

Information provided by Member States in ARQs form the basis for the estimates and trend analysis provided in the World Drug Report. Often, this information and data is not is not sufficient to provide an accurate or comprehensive picture of the world's drug markets. When necessary and where available, the data from the ARQs are thus supplemented with data from other sources.

a Note these criteria have changed over the 2007 and prior World Drug Reports.

Reporting of Annual Report Questionnaires (ARQ) Part II, Drug Abuse, for the year 2006



As in previous years, seizure data made available to UNODC via the ARQs was complemented primarily with data from Interpol/ICPO, data provided to UNODC by the Heads of National Law Enforcement Agencies (HONLEA) at their regional meetings, data provided through UNODC's 'Data for Africa' project, and UNODC's, 'Drug Abuse Information Network for Asia and the Pacific' (DAINAP). In addition, Government reports have been used, wherever available. Other sources considered, included data published by the United States Department of State's Bureau for International Narcotics and Law Enforcement Affairs in its International Narcotics Control Strategy Report.

Price data for Europe was complemented with data from Europol. Precursor data presented are basically those collected by the International Narcotics Control Board (INCB). Demand related information was obtained through a number of additional channels, including UNODC's Global Assessment Program (GAP), the drug control agencies participating UNODC's, 'Drug Abuse Information Network for Asia and the Pacific' (DAINAP), as well as various national and regional epidemiological networks such as the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) or the Inter-American Drug Abuse Control Commission (CICAD). National government reports published in the scientific literature were also used as sources of information. This type of supplementary information is useful and necessary as long as Member States lack the monitoring systems necessary to produce reliable, comprehensive and internationally comparable data.

To this end, UNODC encourages and supports the improvement of national monitoring systems. Major progress has been made over the last few years in some of the main drug producer countries. In close cooperation with UNODC's Illicit Crop Monitoring Program (ICMP) and with the support of major donors – these countries have developed impressive monitoring systems designed to identify extent of and trends of in the cultivation of narcotic plants. These data form another fundamental basis for the trend analysis presented in the World Drug Report.

There remain significant data limitations on the demand side. Despite commendable progress made in a number of Member States, in the area of prevalence estimates for example, far more remains to be done to provide a truly reliable basis for trend andpolicy analysis and needs assessments. The work being done on the *World Drug Report 2006* provides yet another opportunity t emphasise the global need for improving data collection and onitoring to improve the evidene base for effetive policy.

Sources and limitations of data on the supply side

Cultivation, production and manufacture

Global estimates are, in general, more robust on the production side, notably data for plant based drugs, than on the demand side. In line with decisions of the Member States (1998 UNGASS and subsequent Commission on Narcotic Drugs resolutions), UNODC launched an Illicit Crop Monitoring Programme (ICMP) in 1999. The objective of the programme is to assist Member States in establishing national systems to monitor the extent and evolution of the illicit cultivation of narcotics crops on their territories. The results are compiled by UNODC to present global estimates on an annual basis. Data on cultivation of opium poppy and coca bush and production of opium and coca leaf, pre-

Reporting of Annual Report Questionnaires (ARQ) Part III, Illicit supply of drugs, for the year 2006

sented in this report for the main producing countries (Afghanistan, Myanmar and Laos for opium and Colombia, Peru and Bolivia for coca) have been derived from these national monitoring systems operating in the countries of illicit production, covering the period up to, and including 2007. The Government of Morocco, in cooperation with UNODC, also conducted surveys on illicit cannabis cultivation and cannabis resin production in 2003, 2004 and 2005. Estimates for other countries presented in this report have been drawn from replies to UNODC's Annual Reports Questionnaire, from various other sources including reports from Governments, UNODC field offices and the United States Department of State's Bureau for International Narcotics and Law Enforcement Affairs.

The key indicator for measuring progress made towards the supply reduction goals set out in the UNGASS Political Declaration of June 1998 is the area under cultivation of narcotic crops. Since 1999, UNODC has been supporting the establishment of national monitoring systems in the main narcotics production countries. These monitoring systems are tailored to national specificities. The direct participation of UNODC ensures the transparency of the survey activities. Through its network of monitoring experts at headquarters and in the field, UNODC ensures the conformity of the national systems so that they meet international methodological standards and the information requirements of the international community. Most of these monitoring systems rely on remote sensing technology (i.e. analysis of satellite imagery) in combination with extensive field visits which is made possible through UNODC's field presence in all of the main narcotics producing countries. Satellite images, in combination with ground information, offer a reliable and objective way of estimating illicit crops. Depending on the local conditions, the surveys are conducted either on a census approach (coca cultivation in Colombia, Peru and Bolivia, cannabis cultivation in Morocco) or a sample approach (opium poppy cultivation in Afghanistan, Myanmar and Laos). In the case of sampling, the potential error depends on the number of villages investigated and/or on the number of satellite photos which form the basis for subsequent extrapolations to the agricultural land. In the case of Afghanistan, for instance, the estimated area under poppy cultivation in the 2007 opium poppy survey ranged, within the confidence interval (α= 0.1) between 177,000 and 209,000 hectares, with a mean estimate of 193,000.

In addition, ground surveys, assist UNODC to obtain information on yields, drug prices and various other socio-economic data that is useful for alternative development interventions. Detailed discussion of the methodological approaches can be found in the methodology section of each survey. Surveys are fully downloadable at www.unodc.org.

UNODC has also started to conduct yield surveys in some countries, measuring the yield of test fields, and to develop methodologies to extrapolate the yields from proxy variables, such as the volume of poppy capsules or the number of plants per plot. This approach is used in South-East Asia as well as in Afghanistan. All of this is intended to improve yield estimates, aiming at information that is independent from farmers' reports. The accuracy of the calculated yields depends on a number of factors, including the number of sites investigated. In the case of Afghanistan the confidence interval for the mean yield results in the 2007 survey was, for instance, +/- 2.3% of the mean value (based on α= 0.1).

In areas in which UNODC has not, as yet, undertaken yield surveys, results from other surveys conducted at

the national level are used instead. This is currently still the case for some parts of Bolivia (Chapare) while in other parts of the country (Yungas) as well as in Colombia and in Peru UNODC has already conducted yield surveys in cooperation with the local authorities. The disadvantage of having to take recourse to yield data from other sources is that the sampling strategies does not necessarily fit UNODC's definition of an area under cultivation, and that year on year variations due to weather conditions or due to the introduction of improved seeds, fertilizers and pesticides, are not properly reflected in the end results. The new surveys found higher yields than previous estimates had suggested.

The transformation ratios used to calculate the potential cocaine production from coca leaf or the heroin production from opium are even more problematic. In order to be precise, these calculations would require detailed information at the local level on the morphine content in opium or the cocaine content in the coca leaf, as well as detailed information on the clandestine laboratory efficiency, which in turn is a function of know-how, equipment and precursor chemicals. This information is not available. A number of studies conducted by enforcement agencies in the main drug producing countries have provided some orders of magnitude for the transformation from the raw material to the end product. The problem is that this information is usually based on just a few cases studies which are not necessarily typical for the production process in general. Potential margins of error in this rapidly changing environment, with new laboratories coming on stream while others are being dismantled, are thus, substantial. This also applies to the question of the psychoactive content of the narcotic plants. One study conducted in Afghanistan by UNODC over a couple of years, indicated, for instance, that the morphine content of Afghan opium was significantly higher than had been thought earlier. Based on this study, in combination with information on the price structure (which suggested that at a 10:1 conversion ratio of opium to heroin laboratory owners would lose money), it became clear that this conversion ratio had to be changed. In 2005, the transformation ratio was finally changed to 7:1, following, additional information obtained from interviews with morphine/heroin producers in Afghanistan. This ratio remained unchanged for 2007 as well.[b]

For cocaine, a number of studies have been conducted in the Andean region over the last decade investigating the transformation ratios of coca leaf to cocaine base and cocaine HCL - which also form the basis for UNODC's estimates. However, some of the conversion ratios are not in line with reported price patterns of these substances, raising some questions as to their appropriateness and indicating a need to revisit them. At the same time, it is obviously impossible for UNODC to set up clandestine laboratories and hire 'cooks' in order to improve its statistical basis. All of this underlines the ongoing difficulties to accurately assess global heroin and cocaine production, despite the progress made in assessing area under cultivation and other aspects of cultivation and production.

'Potential' heroin or cocaine production shows the level of production of heroin or cocaine if the opium or coca leaf were transformed into the end products in the respective producer country. Part of the opium or the coca leaf is directly consumed in the producing countries or in neighbouring countries, prior to the transformation into heroin or cocaine. In addition, significant quantities of the intermediate products, coca paste or morphine, are also consumed in the producing countries. These factors are partly taken into account. Coca leaf considered licit in Bolivia and Peru is not taken into account for the transformation into cocaine. Similarly, opium consumed in Afghanistan, Iran and Pakistan is not considered to be available for heroin production. As a result, global estimates of 'potential' production should be rather close to 'actual' production. Moreover, as the transformation ratios used are rather conservative, total 'potential' production may well be close to 'actual' production of the end products if one takes the *de-facto* lower amounts available for starting the transformation process into account.

The use of the concept of 'potential production' at the country level also means that 'actual' heroin or cocaine production is under-estimated in some countries, and over-estimated in others while the estimate for the global level should be only slightly affected by this. The calculation of 'potential' cocaine production estimates for Peru, for instance, exceeds actual local cocaine production as some of the coca paste or coca base produced in Peru is exported to neighbouring Colombia and other countries for further processing into cocaine. Based on the same reasoning, potential cocaine production estimates for Colombia under-estimate actual cocaine production in the country. Actual cocaine manufacture in Colombia makes use of locally produced coca leaf as well as from coca base imported from Peru.

Despite all of these difficulties, the overall accuracy of the global heroin and cocaine estimates has certainly improved over the last few years and can be considered to be reasonably good.

The situation is still less satisfactory when it comes to cannabis. In the case of cannabis herb, the globally most dispersed illegal drug, all available production estimates were aggregated. In most cases, these estimates are, however, not based on scientific studies (often reflecting potential yields of eradicated areas rather than actual

b Details are summarised in UNODC, *Afghanistan Opium Survey 2007*.

production) and often refer to different years (as only a limited number of countries provide such estimates in their annual reports questionnaires). A significant number of countries do not provide any estimates. Therefore, a systematic review was undertaken, once again, of all those countries which over the last decade were identified by other countries as significant cannabis source countries or which reported the seizures of whole cannabis plants (which is indicative of domestic cultivation). For those countries, production was estimated to cover domestic demand, multiplying the number of estimated cannabis users by the average global cannabis herb consumption rate, derived from previous calculations. For countries that were identified as cannabis producing countries but were not identified as major cannabis exporting countries, a certain percentage of domestic demand was used to estimate local production. The percentages chosen depended on quantitative and qualitative information available for different regions. Clearly, this is not an ideal estimation technique but it is optimal amongst those currently available.

In the case of cannabis resin, scientific information on the – most likely - largest cannabis resin producing countries are available which, in combination with seizure statistics, forms a basis for extrapolations to the global level. Another estimate was based on global cannabis herb production estimates and the proportion of resin to herb seizures, assuming that cannabis resin and cannabis herb have the same likelihood to be seized. The average of these two estimates forms UNODC's cannabis resin estimate.

The approach taken to come up with ATS production estimates is one of triangulation, estimating production based on reported seizures of the end products in combination with some assumptions of law enforcement effectiveness, seizure data of precursor chemicals and estimates based on the number of consumers and their likely levels of *per capita* consumption. The average of these three estimates is then used to arrive at UNODC's global estimates for amphetamine, methamphetamine and ecstasy production. The basic estimation procedure remained largely unchanged from the one used since the 2004 *World Drug Report*, which was based on the methodology developed for UNODC's *Study on Ecstasy and Amphetamines, Global Survey 2003.* Some adjustments were made as new information became available.

Trafficking

The information on trafficking, as presented in this report, is mainly drawn from the Annual Reports Questionnaires (ARQ), submitted by Governments to UNODC in 2007 and early 2008 and refers to the year 2006 (and previous years). Additional sources, such as other Government reports, Interpol, the World Customs Organization (WCO), reports by the Heads of National Law Enforcement Agency (HONLEA), data provided via UNODC's 'Data for Africa' project, data provided via UNODC's, 'Drug Abuse Information Network for Asia and the Pacific' (DAINAP), and UNODC's field offices, were used to supplement the information. Priority was, however, given to officially transmitted data in the Annual Reports Questionnaire. The analysis of quantities seized, shown in this report, was based on ARQ's returned by 126 countries over the June 2007–May 2008 period, of which 123 countries provided seizure information. Including information from other sources, UNODC has in its data base (DELTA) seizure data from 152 countries in 2006. Seizures are thus the most comprehensive indicator of the drug situation and its evolution at the global level. Although they may not always reflect trafficking trends correctly at the national level, they tend to show good representations of trafficking trends at the regional and global levels.

There are some technical problems as – depending on the drugs - some countries report seizures in weight terms (kg), in volume terms (litres) while other countries report seizures in 'unit terms'. In the online inter-active seizure report (www.unodc.org),seizures are shown as reported. In the World Drug Report, seizure data have been aggregated and transformed into a unique measurement: seizures in 'kilogram equivalents'. For the purposes of the calculations a 'typical consumption unit' (at street purity) was assumed to be: cannabis herb: 0.5 grams, cannabis resin: 0.135 grams; cocaine and ecstasy: 0.1 grams, heroin and amphetamines: 0.03 grams, LSD: 0.00005 grams (50 micrograms). A litre of seizures was assumed to be equivalent to a kilogram. For opiate seizures (unless specified differently in the text), it was assumed that 10 kg of opium were equivalent to 1 kg of morphine or heroin. Though all of these transformation ratios can be disputed, they at least provide a possibility of combining all the different seizure reports into one comprehensive measure. The transformation ratios have been derived from those used by law enforcement agencies, in the scientific literature, by the International Narcotics Control Board, and were established in consultation with UNODC's Laboratory and Scientific Section. No changes in the transformation ratios used in last year's World Drug Report were made.

Seizures are used as an indicator for trends and patterns in trafficking. In combination with changes in drug prices or drug purities, changes in seizures can indicate whether trafficking has increased or declined. Increases in seizures in combination with stable or falling drug prices is a strong indication of rising trafficking activities. Increasing seizures and rising drug prices, in contrast, may be a reflection of improved enforcement effectiveness. Changes in trafficking can also serve as an indirect indicator for global production and abuse of drugs. Seizures are, of course, only an indirect indicator for trafficking activities, influenced by a number of

additional factors, such as variations in law enforcement practices and changes in reporting modalities. Thus, the extent to which seizure statistics from some countries constitute all reported national cases, regardless of the final destination of the illicit drug, can vary and makes it sometimes difficult to assess actual trafficking activities. The problem is exacerbated by increasing amounts of drugs being seized in countries along the main transit routes, the increasing use of 'controlled deliveries', in which countries forego the possibility of seizing drugs immediately in order to identify whole trafficking networks operating across countries, and 'upstream disruptions', making use of intelligence information to inform partner countries and enable them to seize such deliveries prior to entering the country of final destination. Some of the increase of cocaine seizures in the Andean region in recent years, for instance, may have been linked to such upstream market disruptions.

However, over longer periods of time and over larger geographical entities, seizures have proven to be a good indicator to reveal underlying trafficking trends. While seizures at the national level may be influenced by large quantities of drugs in transit or by shifts in law enforcement priorities, it is not very likely that the same is true at the regional or at the global level. If a large drug shipment, while in transit, is taken out of the market in one country, fewer drugs will be probably seized in the neighbouring countries. Similarly, if enforcement efforts and thus seizures decline in one country, the neighbouring countries are likely to suffer from intensified trafficking activities, resulting in rising levels of seizures. The net results, emerging from changes of enforcement priorities of an individual country, are thus, in general, not significant at the regional or at the global level. Actual changes in trafficking can thus be considered to be among the main reasons for changes in seizures at the regional level or the global level. Indeed, comparisons, on a time-series basis, of different indicators with statistical dependence have shown strong correlations (e.g. global opium production estimates and global seizures of opiates, or global coca leaf production and global cocaine seizures), supporting the statistical worth of seizure statistics at regional and global levels. At the same time, data also show that interception rates have gradually increased over the last decade, reflecting improved law enforcement effectiveness at the global level.

Price and purity data

UNODC also collects and publishes price and purity data. Price and purity data, if properly collected, can be very powerful indicators for the identification of market trends. As supply changes in the short-run are usually stronger than changes on the demand side (which tend to take place over longer time periods), shifts in prices and purities are a good indicator for actual increases or declines of market supply. Research has also shown that short-term changes in the consumer markets are – first of all - reflected in purity changes while prices tend to be rather stable over longer periods as traffickers and drug consumers at the retail level prefer 'round' prices. UNODC collects its price data from the Annual Reports Questionnaire, and supplements this data set by other sources, such as price data collected by Europol and other organisations. Prices are collected for the farm-gate level, the wholesale level ('kilogram prices') and for the retail level ('gram prices'). Countries are asked to provide minimum, maximum and typical prices and purities. In case no typical prices/purities are provided, UNODC calculates the mid-point of these estimates as a proxy for the 'typical' prices/purities (unless scientific studies are available which provide better estimates). What is not known, in general, is the manner in which the data were collected and their actual statistical representativeness. While some improvements have been made in some countries over the last few years, a number of law enforcement bodies in several countries have not, as yet, discovered the powerful strategic value of such data, once collected in a systematic way, at regular intervals, so that it can be used for statistical analysis, drug market analysis and as an early warning system.

Sources and limitations of data on consumption

Extent of drug abuse

a. Overview

UNODC estimates of the extent of illicit drug use in the world have been published periodically since 1997 (see *World Drug Reports 1997, 2000, 2004, 2005, 2006, 2007* and *Global Illicit Drug Trends 2002 and 2003)*. The new round of estimates, presented in this report, is based on information received until April 2008.

Assessing the extent of drug use (the number of drug users) is a particularly difficult undertaking because it involves measuring the size of a hidden population. Margins of error are considerable, and tend to multiply as the scale of estimation is raised, from local to national, regional and global levels. Despite some improvements in recent years, estimates provided by member states to UNODC are still very heterogeneous in terms of quality and reliability. These estimates cannot simply be aggregated globally to arrive at the total number of drug users in the world. Yet it is both desirable and possible to establish basic orders of magnitude - which are obviously subject to revision as new and better information is generated.

A global estimate of the level of abuse of specific drugs involves the following steps:

1. Identification and analysis of appropriate sources;

2. Identification of key benchmark figures for the level of drug abuse in selected countries (annual prevalence of drug abuse among the general population age 15-64) which then serve as 'anchor points' for subsequent calculations;
3. 'Standardization' of existing data (e.g. from age group 12 and above to a standard age group of 15-64);
4. Extrapolation of existing results based on information from neighbouring countries with similar cultural, social and economic situations (e.g. life-time prevalence or current use to annual prevalence, or school survey results to annual prevalence among the general population);
5. Extrapolation of available results from countries in a region to the region as a whole, using all available quantitative and qualitative information;
6. Aggregation of regional results to arrive at global results.

The approach taken to arrive at the global estimates has remained essentially the same since the first attempt was made in 1997.

Estimates of illicit consumption for a large number of countries have been received by UNODC over the years (in the form of Annual Reports Questionnaires (ARQ) submitted by Governments), and have been identified from additional sources, such as other governmental reports and research results from scientific literature. Officially transmitted information in any specific year, however, would not suffice to establish global estimates. Over the period June 2007 to May 2008, for instance, 109 countries provided UNODC with responses to the ARQ on Drug Abuse (Part II), but only about half of these provided new quantitative estimates though most of these estimates did not refer to 2006 but to some previous year. Over the years, with the inclusion of estimates referring to previous years, UNODC has collected quantitative estimates of the drug situation from 110 countries, including 80 countries providing drug use estimates among the general population and 95 countries providing student population estimates. In cases of estimates referring to previous years, the prevalence rates were left unchanged and applied to new population estimates for the year 2006. For countries that did not submit information, other sources, where available, were identified. Other sources were also looked for when the officially transmitted prevalence rates in the ARQ were already old. In addition, a number of estimates needed to be 'adjusted' (see below). Using all of these sources, estimates were established for 149 countries, territories and areas. Results from these countries were extrapolated to the sub-regional level and then aggregated into the global estimate.

Detailed information is available from countries in North America, a large number of countries in Europe, a number of countries in South America, Australia and New Zealand, Oceania and a limited number of countries in Asia and in Africa. For other countries, available qualitative information on the drug use situation only allows for some 'guess estimates'. In the case of complete data gaps for individual countries, it was assumed that drug use was likely to be close to the respective sub-regional average, unless other available indicators suggested that they were likely to be above or below such an average, and the sub-regional averages were then adjusted accordingly.

One key problem in currently available prevalence estimates from countries is still the level of accuracy, which varies strongly from country to country. While a number of estimates are based on sound epidemiological surveys, some are obviously the result of guesswork. In other cases, the estimates simply reflect the aggregate number of drug addicts found in drug registries which probably cover only a small fraction of the total drug using population in a country.

Even in cases where detailed information is available, there is often considerable divergence in definitions used - registry data (people in contact with the treatment system or the judicial system) versus survey data (usually extrapolation of results obtained through interviews of a selected sample); general population versus specific surveys of groups in terms of age (e.g. school surveys), special settings (such as hospitals or prisons), life-time, annual, or monthly prevalence, etc.

In order to reduce the error from simply aggregating such diverse estimates, an attempt was made to standardize - as a far as possible - the very heterogeneous data set. Thus, all available estimates were transformed into one single indicator – annual prevalence among the general population age 15 to 64 and above - using transformation ratios derived from analysis of the situation in neighbouring countries, and if such data were not available, on estimates from the USA, the most studied country worldwide with regard to drug use.

The basic assumption is that the level of drug use differs between countries, but that there are general patterns (e.g. lifetime time prevalence is higher than annual prevalence; young people consume more drugs than older people) which apply to most countries. It is also assumed that the ratio between lifetime prevalence and annual prevalence among the general population or between lifetime prevalence among young people and annual prevalence among the general population, do not vary too much among countries with similar social, cultural and economic situation. Various calculations of long-term data from a number of countries seem to confirm these assumptions.

In order to minimize the potential error from the use of different methodological approaches, all available

estimates for the same country - after transformation - were taken into consideration and - unless methodological considerations suggested a clear superiority of one method over another - the mean of the various estimates was calculated and used as UNODC's country estimate.

b. Indicators used

The most widely used indicator at the global level is the annual prevalence rate: the number of people who have consumed an illicit drug at least once in the last twelve months prior to the survey. As "annual prevalence" is the most commonly used indicator to measure prevalence, it has been adopted by UNODC as the key indicator to measure the extent of drug use. It is also part of the Lisbon Consensus[c] (20-21 January 2000) on core epidemiological demand indicators (CN.7/2000/CRP.3). The use of "annual prevalence" is a compromise between "lifetime prevalence" data (drug use at least once in a lifetime) and data on current use (drug use at least once over the last month). Lifetime prevalence data are, in general, easier to generate but are not very illustrative. Data on current use are of more value. However, they often require larger samples in order to obtain meaningful results, and are thus more costly to generate, notably if it comes to other drugs than cannabis which is widespread.

The "annual prevalence" rate is usually shown as a percentage of the youth and adult population. The definitions of the age groups vary, however, from country to country. Given a highly skewed distribution of drug use among the different age cohorts in most countries (youth and young adults tend to have substantially higher prevalence rates than older adults or retired persons), differences in the age groups can lead to substantially diverging results. Typical age groups used by UNODC Member States are: 12+; 14+: 15+; 18+; 12-60; 16-59; 18-60; 15-45; 15-75; and increasingly age 15-64. The revised version of the Annual Reports Questionnaire (ARQ), adopted by Member States, which since 2001/02 has replaced the previous ARQ, stipulates the age group 15-64 as the key population group for which drug use to be measured against. Prevalence data in this report are thus reported for the age group 15-64. In case the age groups reported by Member States did not differ significantly from this age group, they were presented as reported and the age group was explicitly added. In cases where studies were based on significantly different age groups, results were adjusted to the age group of 15-64. (See below).

The methods used for collecting data on illicit activities vary from country to country. This reduces comparability. Possibilities to reduce differences – ex post – arising due to different methodological approaches are limited. UNODC thus welcomes efforts at the regional level to arrive at more comparable data (as is currently the case in Europe under the auspices of EMCDDA and in the Americas under the auspices of CICAD).

In a number of cases, diverging results are also obtained for the same country, applying differing methodological approaches. In such cases, the sources were analysed in-depth and priority was given to the methodological approaches that are usually also used in other countries. For example, it is generally accepted that household surveys are reasonably good instruments to estimate cannabis, ATS or cocaine use among the general population. Thus household survey results were usually given priority over other sources of prevalence estimates, such as reported registry data from the police or from treatment providers.

However, when it comes to heroin abuse (or drug injecting), there seems to be a general agreement that annual prevalence data derived from national household surveys tend to grossly under-estimate such abuse because severe heroin addicts often do not live in householdsd They may be homeless, in hospitals or in prisons. Moreover, heroin abuse is highly stigmatized so that the willingness to openly report a heroin abuse problem is limited. However, a number of indirect methods have been developed over the last two decades to provide estimates for this group of problem drug users. They include various multiplier methods (e.g. treatment multipliers, police data multipliers, HIV/AIDS multipliers or mortality multipliers), capture-recapture methods, and multivariate indicators.

Whenever such indirect estimates for problem drug use were available, they were given priority over household survey results. Most of the estimates for problem drug use were obtained from European countries. Unless there was evidence that a significant proportion of prob-

c The basic indicators to monitor drug abuse, agreed by all participating organizations that formed part of the Lisbon Consensus in 2000, are:

- Drug consumption among the general population (estimates of prevalence and incidence);
- Drug consumption among the youth population (estimates of prevalence and incidence);
- High-risk drug abuse (estimates of the number of injecting drug users and the proportion engaged in high-risk behaviour, estimates of the number of daily drug users);
- Utilization of services for drug problems (number of individuals seeking help for drug problems);
- Drug-related morbidity (prevalence of HIV, hepatitis B virus and hepatitis C virus among illicit drug consumers);
- Drug-related mortality (deaths directly attributable to drug consumption).

While in the analysis of the drug abuse situation and drug abuse trends all these indicators were considered, when it came to provide a global comparison a choice was made to rely on the one key indicator that is most available and provides an idea of the magnitude for the drug abuse situation: annual prevalence among the population aged 15 to 64.

d The problem of under-estimation is more widespread for heroin, but it is not excluded for other drugs such as cocaine or methamphetamine.

lem drug use was related to the use of other drugs, it was assumed that the problem drug use concerned opiates. In the case of some of the Nordic countries, where amphetamine use is known to account for a significant proportion of overall problem drug use, the data of reported problem drug users were corrected by applying the proportion of opiate consumers in treatment in order to arrive at estimates for opiate abuse. This also applied to estimates for Spain, where cocaine has gained a significant proportion among problem drug users.

For other drugs, priority was given to annual prevalence data found by means of household surveys. A number of countries, however, did not report annual prevalence data, but lifetime or current use of drug consumption, or they provided annual prevalence data but for a different age group. In order to arrive at basically comparable results, it was thus necessary to extrapolate from reported current use or lifetime prevalence data to annual prevalence rates and/or to adjust results for differences in age groups.

Indirect methods to measure problem drug use

Treatment multiplier: If a survey among heroin addicts reveals, for instance, that one quarter of them was in treatment in the last year, the multiplication of the registered treatment population with a multiplier of four provides an estimate of the likely total number of problem heroin users in a country.

Police data multiplier: Similarly, if a survey among heroin addicts reveals that one out of five addicts was arrested in the previous year, a multiplication of the persons arrested for heroin possession by the multiplier (five) provides another estimate for the number of heroin users. Establishing various multipliers and applying them to the registered drug using population, provides a range of likely estimates of the heroin abuse population in a country. Either the mid-point of the range, the median or the mean of these estimates can be subsequently used to arrive at a national estimate.

Capture-recapture models are another method based on probability considerations, which can be undertaken without additional field research[e]. If in one register (e.g. arrest register) 5000 persons are found (for possession of heroin) and in a second register (e.g. treatment register) 2000 persons are found (for treatment of heroin abuse), and there are 400 persons who appear in both registries, it can be assumed that 20% (400/2000) of the drug addicts have been arrested, so that the total heroin addict population could be around 25,000 (5000/20%), five times larger than the total number of arrested heroin users.[f] Results can usually be improved if data from more than two registers are analysed (e.g. data from arrest register, treatment register, ambulance register, mortality register, substitution treatment register, HIV register etc). More sophisticated capture-recapture models exist, and are used by some advanced countries, in order to make calculations based on more than two registries. However, in order to arrive at reasonable orders of magnitude of the heroin problem in a particular country it is probably sufficient to calculate the various combinations shown above and subsequently report the mid-point, the median or the mean of the resulting estimates.

Another interesting approach is the use of *multivariate indicators*. For this approach, a number of local/regional studies are conducted, using various multiplier and/or capture-recapture methods. Such local studies are usually far cheaper than comprehensive national studies. They serve as anchor points for the subsequent estimation procedures. The subsequent assumption is that drug abuse at the local level correlates with other data that are readily available. For instance, heroin arrest data, heroin treatment data, IDU related HIV data, etc. are likely to be higher in communities where heroin abuse is high and lower in communities where heroin abuse is low. In addition, heroin abuse may correlate with some readily available social indicators (higher levels in deprived areas than in affluent areas; higher levels in urban than in rural areas etc). Taking all of this additional information into account, results from the local studies are then extrapolated to the national level.

e Such methods were originally developed to estimate the size of animal population. If, for instance, 200 fish are caught (' capture'), marked, and released back into the lake, and then the next day 100 fish are caught, of which 10 were already marked ('re-captured'), probability considerations suggest that the number of fish captured the first day were a 10% sample of the total population. Thus the total population of the lake can be estimated at around 2000 fish.

f The advantage of this method is that no additional field research is necessary. There are, however, problems as the two ' sampling processes' for the registries in practice are not independent from each other so that some of the underlying assumptions of the model may be violated (e.g. the ratio could be higher as some of the people arrested are likely to be transferred to a treatment facility; thus the ratio does not correspond any longer to the true proportion of people arrested among the addicts population, and may lead to an underestimation of the total heroin addict population).

c. Extrapolation methods used

The methods used for these adjustments and extrapolations are best explained by providing a number of concrete examples:

Adjustment for differences in the age groups:

New Zealand, for instance, carried out a household survey in 2006, covering the population age 15-45. According to this survey, annual prevalence of ecstasy use was found to affect 3.4% of the population 15-45, equivalent to about 56,000 people. Given the strong association between ecstasy use and younger age groups it can be assumed that there is little ecstasy use in the 45+ age group. Thus, dividing the ecstasy using population established above by the age group 15-64 (2,764 million) gives an estimated prevalence rate of 2.2%.

The situation is slightly more complex when it comes to cannabis. New Zealand reported a cannabis prevalence rate of 17.9% among the population age 15-45. This estimate can be seen as the 'ceiling' for an estimate for the population age 15-64. Such an estimate would imply that persons in the age group 45-65 consume as much cannabis as those in the age group 15-45. Assuming that cannabis use ceases to exist above the age of 45, would result in an estimate of 11.9% for the population age 15-64. This is the 'floor' estimate. Both assumptions are not very realistic when it comes to cannabis. Reality should be somewhere in between the 'floor' estimate and the 'ceiling' estimate. Such an estimate has been derived from an extrapolation from the age structure of cannabis users found in Australia, which was then applied to existing data for New Zealand. Based on the assumption that the age structure of cannabis users in New Zealand is similar to the one found in Australia the likely annual prevalence rate of cannabis use in New Zealand for the population age 15-64 can be estimated at around 13.3%. Similar considerations were also used for the age-group adjustments of data from other countries.

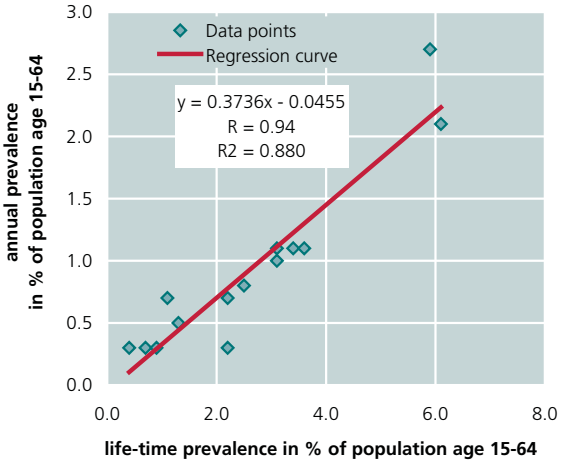
Similar considerations were also used for the age-group adjustment of data from other countries. A number of countries reported prevalence rates for the age groups 15+ or 18+. In these cases it was generally assumed that there was no significant drug use above the age of 65. The number of drug users based on the population age 15+ (or age 18+) was thus simply shown as a proportion of the population age 15-64.

Extrapolation of results from lifetime prevalence to annual prevalence

Some countries have conducted surveys in recent years, but did not ask the question whether drug consumption took place over the last year. In such cases, results can be still extrapolated to arrive at annual prevalence estimates and reasonably good estimates can be expected. Taking data for life-time and annual prevalence of cocaine use in countries of Western Europe, for instance, it can be shown that there is a rather strong positive correlation between the two measures (correlation coefficient R = 0.94); i.e. the higher the life-time prevalence, the higher is, in general, annual prevalence and *vice versa*. Based on the resulting regression curve (y = 0.3736 * x - 0.0455 with y = annual prevalence and x = life-time prevalence) it can be estimated that a West European country with a life-time prevalence of 2% is likely to have an annual prevalence of around 0.7% (also see figure).

Almost the same result is obtained by calculating the

Annual and lifetime prevalence rates of cocaine use in Western Europe



Sources: UNODC, Annual Reports Questionnaire Data / EMCDDA, Annual Report.

ratio of the unweighted annual prevalence rates of the West European countries and the unweighted life-time prevalence rate (0.93/2.61 = 0.356) and multiplying this ratio with the life-time prevalence of the country concerned (2% * 0.356 = 0.7%).

A similar approach used was to calculate the overall ratio by averaging the annual/life-time ratios, calculated for each country[g]. Multiplying the resulting average ratio (0.387) with the lifetime prevalence of the country concerned provides the estimate for the annual prevalence (0.387 * 2% = 0.8%). This approach also enables the calculation of a confidence interval for the estimate. With a 95% probability the likely annual prevalence estimate for the country concerned falls within a range of 0.6% to 1%[h]. Given this close relationship between

g For each country the ratio between annual prevalence and lifetime prevalence is calculated. The results are than averaged: In our example: (0.64 + 0.32 + 0.43 + 0.14 + 0.32 + 0.38 + 0.35 + 0.32 + 0.75 + 0.31 + 0.32 + 0.33 + 0.46+ 0.34) : 14 = 0.387

h The calculation of the confidence interval can be done as follows:

1).Determination of alpha (usually 0.05);

2).Determination of the number of observations (14 in this case)

life-time and annual prevalence (and an even stronger correlation between annual prevalence and monthly prevalence), extrapolations from life-time or current use data to annual prevalence data was usually given preference to other kinds of possible extrapolations.

But, good estimation results (showing only a small potential error) can only be expected from extrapolations done for a country located within the same region. If instead of using the West European average (0.387), the ratio found in the USA was used (0.17), the estimate for a country with a lifetime prevalence of cocaine use of 2% would decline to 0.3% (2% * 0.17). Such an estimate is likely to be correct for a country with a drug history similar to the United States. The USA has had a cocaine problem for more than two decades and is thus confronted with very high lifetime prevalence rates while it made considerable progress in reducing cocaine consumption as compared to the mid 1980s. All of this leads to a small proportion of annual prevalence to lifetime prevalence. In Western Europe, by contrast, the cocaine problem is a phenomenon of the last decade and still growing.

Against this background, data from countries in the same region were used, wherever possible, for extrapolation purposes. Thus, data from Central and Eastern Europe were used to extrapolate results for other countries in the region which did not collect annual prevalence rates. Most of these countries had very low drug abuse levels during the cold war, which, however, grew rapidly in the 1990s.

Extrapolations based on treatment data

For a number of developing countries, the only drug related data available on the demand side was treatment demand. In such cases, the approach taken was to look for other countries in the region with a similar socio-economic structure, which reported annual prevalence data and treatment data. As a next step, the ratio of people treated per 1000 drug users was calculated for each country. The results from different countries were then averaged and the resulting ratio was used to extrapolate the likely number of drug users from the number of people in treatment.

Extrapolations based on school surveys

Analysis of countries which have conducted both school surveys and national household surveys shows that there is, in general, a positive correlation between the two variables, particularly for cannabis, ATS and cocaine. The correlation, however, is weaker than that of lifetime and annual prevalence or current use and annual prevalence among the general population but stronger than the correlation between opiate use and IDU-related HIV cases and, stronger than the link between treatment and drug use.

Extrapolation to regional and global level

The next step, after having filled, as far as possible, the data gaps, was to calculate the average prevalence for each sub-region. For this purpose the reported/estimated prevalence rates of countries were applied to the population aged 15-64, as provided by the United Nations Population Division for the year 2005. For the remaining countries, for which no estimate could be made, the average prevalence rate of the respective sub-region was applied, unless some additional information suggested that the sub-regional average would be too high or too low for the countries concerned. All of these 'adjustments', based on qualitative information, affected the overall estimate only slightly.

Following the detailed calculation of all of the sub-regional estimates, the individual sub-regional estimates ('number of drug users') were aggregated to form a regional estimate, and the regional estimates were then aggregated to arrive at the global estimates.

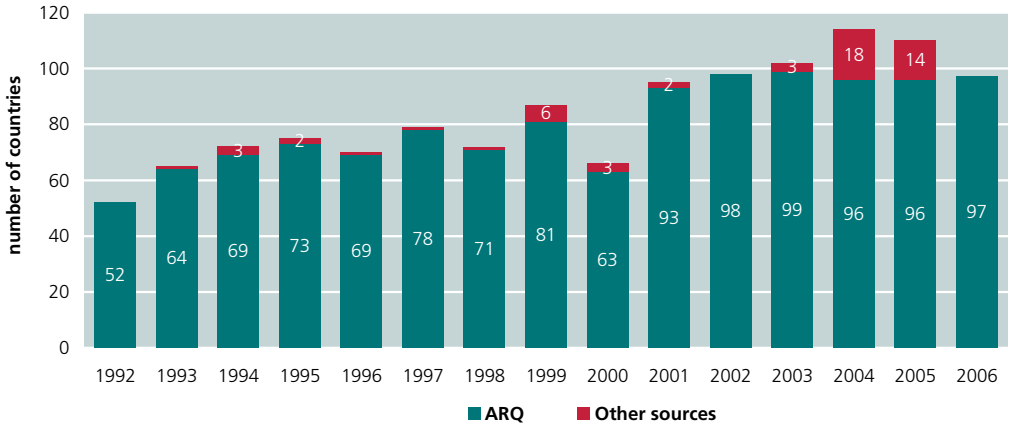
d. Concluding remarks

It goes without saying that each method of extrapolating results from other countries is not without problems and despite of efforts made, results of these estimations for individual countries must be still interpreted with caution. However, this should not influence the overall results as some under-estimates are, most probably, offset by over-estimates, and *vice-versa,* and every attempt has been made to avoid any systematic bias in the estimation process. Moreover, in order to reduce the risk of any systematic bias, estimations were based, as far as possible, on the data from neighbouring countries in the region.

It is, however, recognized that the currently provided estimations can change considerably once survey data becomes available. UNODC's methodology to arrive at global estimates by extrapolating results from a sample of countries (for which data is available) to a sub-region,

and 3. Calculation of the standard deviation (0.1502 in this example). This allows to calculate the standard error (standard deviation : (square root of n), i.e. (0.1502 : (square root of 14)) = 0.040)). The z value for alpha equalling 0.05 is 1.96. Multiplying the standard error with the z-value (0.040*1.96) would give the confidence interval (+/- 0.078). But, given the low number of observations (where n< 30), the use of t-statistics is indicated instead. In this case, the standard error must be multiplied with the appropriate t-value (2.145 for n-1 degrees of freedom (14-1) and alpha equalling 0.05 for two-sided t-statistics as can be found in t-value statistics). The result is a confidence interval of +/- 0.0858 (=0.040 * 2.145). Several spreadsheet programs provide such statistics automatically. In Excel, for instance, the 'descriptive statistics' in tool menu under 'data analysis' calculates the confidence interval automatically and uses the t-statistics, wherever appropriate. Applying the +/-0.086 confidence interval to the average ratio calculated above to the mean ratio of 0.387 gives a range of ratios of 0.301 to 0.473. Using the two ratios one arrives at a minimum estimate of the annual prevalence rate of 0.6% (2% * 0.301) and a maximum estimate of the annual prevalence rate of 0.95% (2% * 0.473).

Number of countries & territories reporting drug use trends to UNODC



Sources: UNODC, Annual Reports Questionnaire Data ; UNODC Field Office, UNODC, 'Data for Africa project', UNODC, DAINAP, UNODC, GAP, EMCDDA, CICAD, HONLEA reports.

also means that methodological changes can have a significant impact on the final estimates. In many cases though, actual survey data received from Member States turned out to be rather close to UNODC's estimates.

The global estimates presented in this report must, nonetheless, be treated with caution. They provide likely orders of magnitude, as opposed to precise statistics on the prevalence and evolution of global drug abuse. Further changes can be still expected as countries provide more robust estimates based on rigorous scientific methods. Nonetheless, in the absence of global studies on drug abuse, the estimations and the estimation procedures provided in this report guarantee the best picture that is currently obtainable.

Trends in drug use

a. Overview

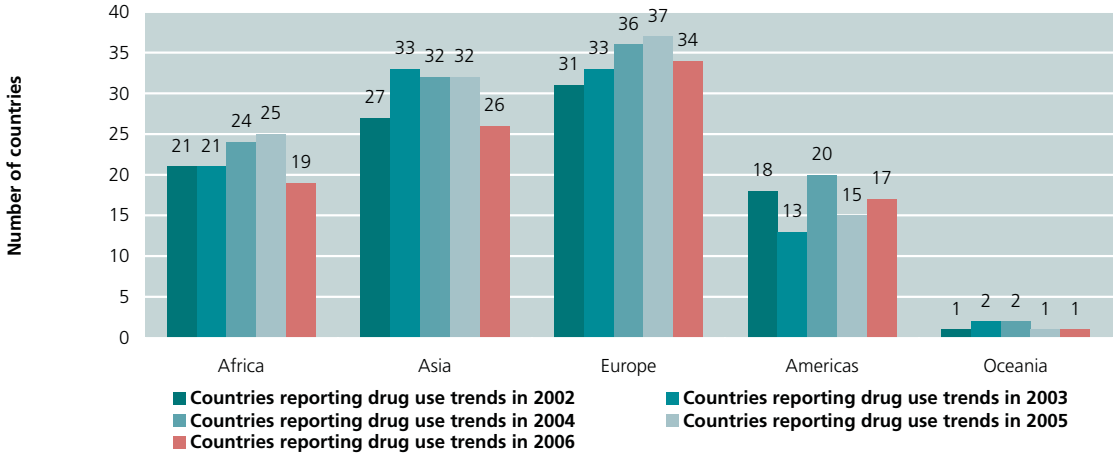
Ideally, global trends in drug use should be monitored by comparing estimates of drug use in one year with those found in a subsequent year. In practice, however, this approach does not always work as some changes in the global estimates are always due to methodological improvements and not due to underlying changes in drug use. Moreover, general population surveys are very expensive to conduct and only a few countries have an ongoing monitoring system based on these instruments.

Many countries collect, however, routine data such as the number of persons arrested for drug abuse, urine testing of arrestees, number of persons undergoing drug treatment, drug hotlines, drug related emergency department visits, drug related interventions by ambulances, or they monitor drug use based on school surveys. In addition, drug experts dealing on a regular basis with drug issues – even without having precise data at hand – often have a good feeling about whether use of certain drugs is increasing, stabilizing or declining in their constituency.

This knowledge base is regularly tapped by UNODC. Member States usually pass the Annual Reports Questionnaire to drug experts in their country (often in the ministry of health) who provide UNODC with their perception, on a five-point scale, of whether there has been a 'large increase', ' some increase', ' no great change', some decrease' or a 'large decrease' in the use of the various drugs over the past year. The perceptions may be influenced by a number of factors and partial information, including police reports on seizures and arrests, reports from drug treatment centres, reports from social workers, press reports, personal impressions, etc. Any of these influencing factors could contain a reporting bias which has the potential to skew the data towards a misleading increase or decrease. Prioritization of the drug issue is another factor which influences reporting. It can probably be assumed that the countries which reply regularly to the ARQ are those which take the drug problem more seriously. In a number of cases this is a consequence of rising levels of drug use and thus increased public awareness of the problem. All of this suggests that the sample of countries replying to the ARQs may be slightly biased towards countries faced with a deteriorating drug problem. Results based on trend data must thus be treated with caution and should not be over-interpreted.

Despite these caveats, trend data provide interesting insights into the growth patterns of individual drugs as well as into regional and global growth patterns. They represent the most comprehensive data set of expert opinion available on the development of the drug abuse

Regional distribution of reports received on drug use trends for the years 2002-2006



Source: UNODC, Annual Reports Questionnaire Data.

problem at the global level, provided in a consistent manner over more than a decade.

Replies to the Annual Report Questionnaire (ARQ) on trends in drug use are far more comprehensive than on estimating the number of drug users. The analysis on drug use trends for the year 2006 was based on the replies of 97 countries and areas, about the same number as a year earlier, up from 52 countries and areas in 1992. In recent years, in addition, information was gathered from other sources (Government reports, UNODC Field Offices, UNODC's Data for Africa Project, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), EMCDDA, CICAD, HONLEA reports and local studies). For the year 2006, however, there was (i) a strong overlap of information received directly from countries in reply to the ARQ and information available through other sources and/or (ii) the information from other sources referred to trends observed in 2005, and/or (iii) information from other sources showed conflicting results for missing countries. The decision was thus taken to base the trend analysis for the year 2006 primarily on the officially received ARQs. The distribution of countries reporting in 2006 was roughly the same as in previous years and provides a reasonably good coverage across all regions.

b. Aggregating trend data

Various methods have been developed and have been used in this report for the trend aggregation. The 'traditional' method consists of simply counting the number of countries reporting increasing, stable and declining levels of drug abuse. Changes in the net results, i.e. number of respondents reporting increases less those reporting declines, have proven to be a good and useful indicator for showing overall changes in the trend. This is in line with business cycle trend analysis where enterprises are asked on a routine basis about their perceptions of whether production is expected to increase, remain stable, or fall over the new few months, and where the net results (number of increasing trends less number of falling trends) are recorded and presented in order to identify changes in trends. For the purpose of calculating this indicator, the categories 'strong increase' and 'some increase' are aggregated into a new category 'INCREASE'. Similarly, the categories 'strong decline' and 'some decline' are aggregated into a new category 'DECLINE'. 'INCREASE' less 'DECLINE' gives the 'net change'.

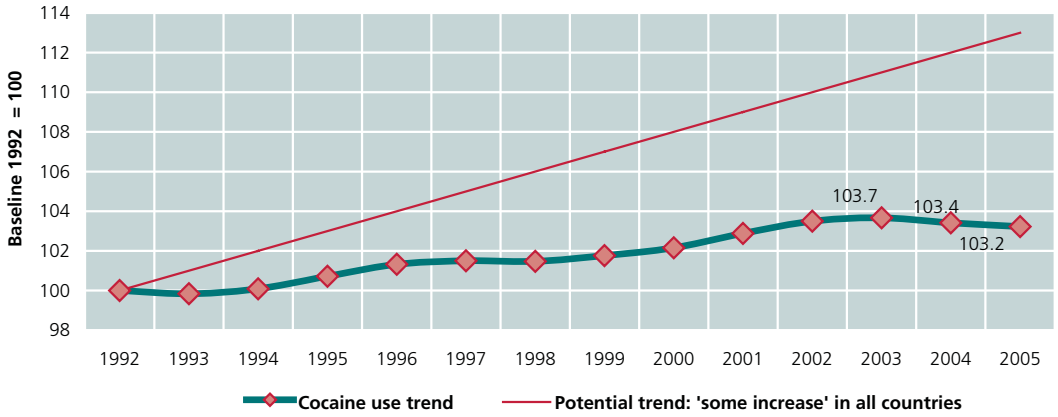
The advantage of this method for describing drug trends at the global level is that a large number of actors, independent of each other, express their views on the trends in their countries. Though some experts may well report wrong trend data, it is unlikely that mistakes all go in the same direction. The disadvantage of this approach is that it gives equal weight to the reports of small and big countries, which can be potentially misleading if global trends are to be identified.

Drug Use Trends as perceived by experts

Another analytical tool, referred to in this report as *Drug Use Trends as perceived by experts,* has been designed by UNODC to allow for a different presentation of regional and global trends in drug use, reported by Member States to UNODC. The *Drug Use Trend as perceived by experts* builds on previous work of UNODC which resulted in the concept of a *Weighted Analysis on Drug Abuse Trends (WADAT)* in 2004.

The trend is constructed as follows: each degree of trend estimation is given a numerical value ranging from –2 to

Cocaine use trends* as perceived by experts: 1992-2005



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports and local studies

+2 (–2 representing a 'large decrease'; –1, 'some decrease'; 0, 'no great change'; +1, 'some increase'; and +2, 'a large increase'). Estimates for each drug type are then multiplied by the proportion of the drug using population of the country in relation to the drug using population at the global level. The national estimates are subsequently added to represent a global trend estimate for each drug type. The results are shown as a cumulative trend curve.[i]

In the 2004 *World Drug Report*, the trends provided by Member States had been weighted by the size of a country's population, in line with the original *WADAT* concept. Using the population as the weighting instrument shows, in general, reasonable results at the regional level when drug prevalence rates do not differ drastically among countries. It creates, however, a serious problem once an attempt is made to apply the concept to the global level, notably for drugs which have distinct regional distribution patterns. For instance, cocaine use is concentrated in the Americas and in Western Europe while consumption levels in Asia are still minimal. If a highly populated country in Asia, like India, reports a rise in cocaine use, this rise is typically from very low levels. It must not be ignored, but it has, for the time being, not much impact on global cocaine consumption. Weighting the trend data with population data would, however, raise the global trend for cocaine consumption sharply. Such results could be potentially misleading.

Thus, as an alternative solution was sought to overcome this problems. The option chosen was to use for cocaine, for instance, UNODC's estimates on the number of cocaine users per country as the weighting factor. For countries, for which no prevalence estimates exist, the average prevalence rate of the respective sub-region is taken as a proxy for the unknown actual prevalence rate. Based on this approach, prevalence estimates become available for all countries of the world. Of course, for some countries the 'weight' given to their trend data may be slightly too small and for others slightly too big, but the potential error resulting from this procedure is less than the potential error from weighting the trend with the general population.

The graph above shows the results for cocaine, starting with 1992 as a baseline (=100). The graph shows an upward trend over the 1992-2003 period, followed by a stabilization over the 2003-2006 period. This suggests that after an increase over the 1992-2003 period cocaine use, at the global level, has stabilized in recent years. The fact that the trend line is now at 103.3, and thus above 100, indicates that there was a net-increase in cocaine consumption over the 1992-2006 period. But, how important was the increase? If all countries had reported a 'strong' increase every year from 1992 to 2006, the composite perception trend would have reached a level of 128 (2 points per year); if all countries had reported 'some increase' every year, the trend would be now at 114 (1 point per year); if countries had considered the trend to have been stable, the line would have remained stable at 100. If countries had reported every year 'some decline', the trend would be at 86, and in case of a 'strong decline' at 72

One advantage of this tool is that it takes the trends reported by Member States and the size of their drug using population into account. In other words, the trend

i If country X, which has 2% of the world cocaine population, reports a 'strong increase' in cocaine use, the calculation is as follows: 2 * 0.02 = 0.04. If country Y, which has 3% of the world population reports 'some decline', the calculation is: -1*0.03 = -0.03. The values of all other countries are then calculated the same way and aggregated. For 2005, the net result for cocaine was -0.19. This number is then added to last year's number: 103.41 + (-0.19) = 103.22.

gives more weight to the results reported from countries with a large cocaine using population than to those with small numbers of cocaine users. This is in line with the observation that the impact of a rise in drug consumption in a country with large numbers of drug users has a greater impact on global drug consumption than the rise in some other countries where drug use has just started. Another advantage is that the trend takes into account the degree of change in drug use levels, thus making better use of all information made available to UNODC by Member States.

There are, of course, also limitations that need to be taken into account when interpreting the results. The information provided remains, in most cases, an expert opinion and is not necessarily based on scientific evidence. While this tool assists in the analysis of trends, the quality of these perceptions remains the key issue. A mistake made by an expert in a country with a large drug using population can seriously distort the global trend estimates. There is also a danger that some experts may have a political agenda. Thus, this tool cannot be seen as substitute for serious scientific studies on the prevalence of drug consumption in a country. Moreover, it cannot be taken for granted that the differences between various degrees of drug use trends ("some decrease" and "large decrease") are interpreted the same way across countries, or even in the same country in different reporting years.

Reporting trends in the use of a drug type may be also biased by opposing trends for the individual substances (cocaine HCL, coca paste/base, crack-cocaine). For the purpose of this report, not just the drug group but each individual drug has been taken into consideration. The unweighted average of all reported trends within a drug group are calculated. While for some countries, the detailed profile of substance use is known (which could give more accurate results), this is not be the case for many others. Thus the general rule of averaging all drugs within one category has been applied.

It should be also be noted that the *Drug Use Trend as perceived by experts* is limited in that it only provides general directions with regard to the main drug types reported by Member States, inevitably leading to very broad generalization. Thus, there remains a need for more drug-specific trend analysis to support the conclusions.

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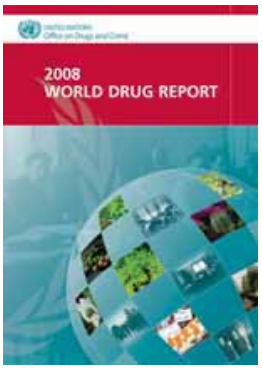

The World Drug Report presents comprehensive information on the illicit drug situation. It provides detailed estimates and trends on production, trafficking and consumption in the opium/heroin, coca/cocaine, cannabis and amphetamine-type stimulants markets. The drug problem is being contained but there are warning signs that the stabilisation which has occurred over the last few years could be in danger. Notable amongst these is the increase in both opium poppy and coca cultivation in 2007, some growth in consumption in developing countries and some development of new trafficking patterns. There have also been encouraging contractions in some of the main consumer markets.

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